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AMERICAN ARCHITECT

FOUNDED 1876

October 1932

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CHALK UP

another score against fear and inertia!

These are hard times for the architect—but there are encouraging signs on the horizon if we will only heed them.

Business is slow but it's not at a standstill!

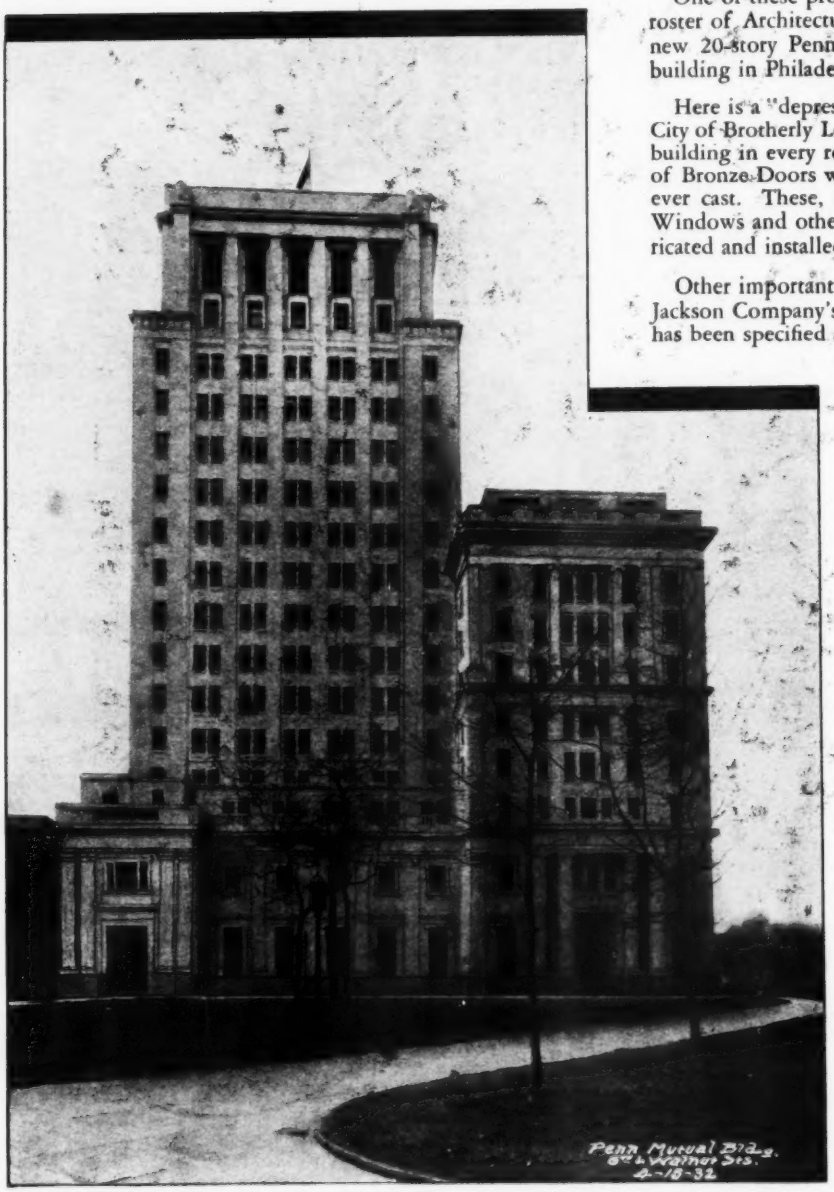
Important building projects are still being conceived, drawn up and executed.

All over the country there are men in charge of big business who have not only kept their heads above water but have gone confidently and courageously forward, planning and *building* for the better days to come.

One of these projects—an important addition to the roster of Architectural Achievements for 1932—is the new 20-story Penn Mutual Life Insurance Company's building in Philadelphia.

Here is a "depression-born" landmark of which "The City of Brotherly Love" can well be proud! It's a *quality* building in every respect and boasts a magnificent pair of Bronze Doors which are probably among the finest ever cast. These, together with the Bronze Grilles, Windows and other Ornamental Metal Work, were fabricated and installed by Wm. H. Jackson Company.

Other important 1932 buildings for which Wm. H. Jackson Company's Tile or Architectural Metal Work has been specified are listed below.



The new Penn Mutual Life Insurance Company Building, Philadelphia, Pa. Architect: Ernest J. Matthewson. Contractor: Doyle & Company. Architectural Metal Work: Wm. H. Jackson Company.

ROCKEFELLER CENTER—Theatre No. 8
New York
Architects—Reinhard & Hofmeister
Corbett, Harrison & MacMurray
Hood & Fouilhoux
Contractor—Barr, Irons & Lane

ROCKEFELLER CENTER—Theatre No. 10
New York
Architects—Reinhard & Hofmeister
Corbett, Harrison & MacMurray
Hood & Fouilhoux
Contractor—John Lowry, Inc.

BRONX COUNTY BUILDING
Architects—Max Hausle & J. H. Friedlander
Contractor—Wm. Kennedy Const. Company

METROPOLITAN LIFE INS. CO. BLDG.
New York
Architects—D. Everett Waid
Harvey Wiley Corbett
Contractor—Starrett Bros. & Eken

DIME SAVINGS BANK—Brooklyn
Architects—Halsey, McCormack & Helmer, Inc.
Contractor—Wm. Kennedy Const. Company

CHRISTIAN SCIENCE PUBLISHING SOCIETY BUILDING—Boston
Architect—Chester Lindsay Churchill
Contractor—Aberthaw Company

U. S. BOTANIC GARDENS—Washington
Architects—Bennet, Parsons & Frost
David Lynn
Contractor—George A. Fuller Co.

INSURANCE CO. of NORTH AMERICA
New York
Architects—Shreve, Lamb & Harmon
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Wm. H. Jackson Company (Est. 1827) produces all types of ARCHITECTURAL METAL WORK—cast, hand-wrought or machine processed—in Bronze, Brass, Nickel, Wrought Iron, Aluminum and the newer Non-Corrosive Alloys. These products include Casement and Double Hung Windows in both Bronze and Aluminum, and Ornamental Metal Work of every description. This Company also maintains a SPECIAL TILING DEPARTMENT which installs Outdoor and Indoor Swimming Pools and all types of Exterior and Interior Tile Work. The Wm. H. Jackson Company's Consulting and Collaborating Services—developed through wide experience in working on major products—are at your disposal without obligation.

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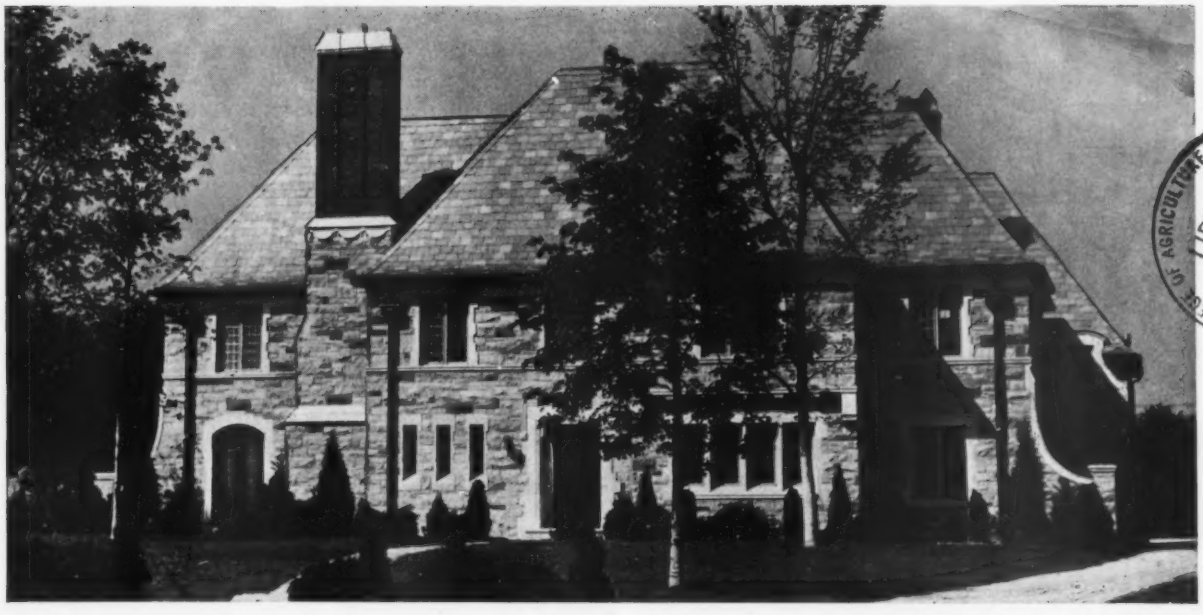

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"Masterpiece of American Homes" heated by a Petro Oil Burner

Basement arrangement proved to be drawing card to thousands of visitors

Among the scores of model homes over the country in which Petro & Nokol oil burners have been installed is this beautifully designed house built by Henry Simons for the American Estates Company of Indianapolis.

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UNIFORMITY

DEPENDABILITY

THE YOUNGSTOWN SHEET AND TUBE COMPANY

GENERAL OFFICES . . . YOUNGSTOWN, OHIO

American Architect, published monthly by International Publications, Inc., 57th Street at 8th Avenue, New York, N. Y. Yearly subscription $3.00. Entered as second class matter, April 5th, 1926, at the Post Office, at New York, N. Y., under the act of March 3rd, 1879. Issue number 2612, dated October, 1932.

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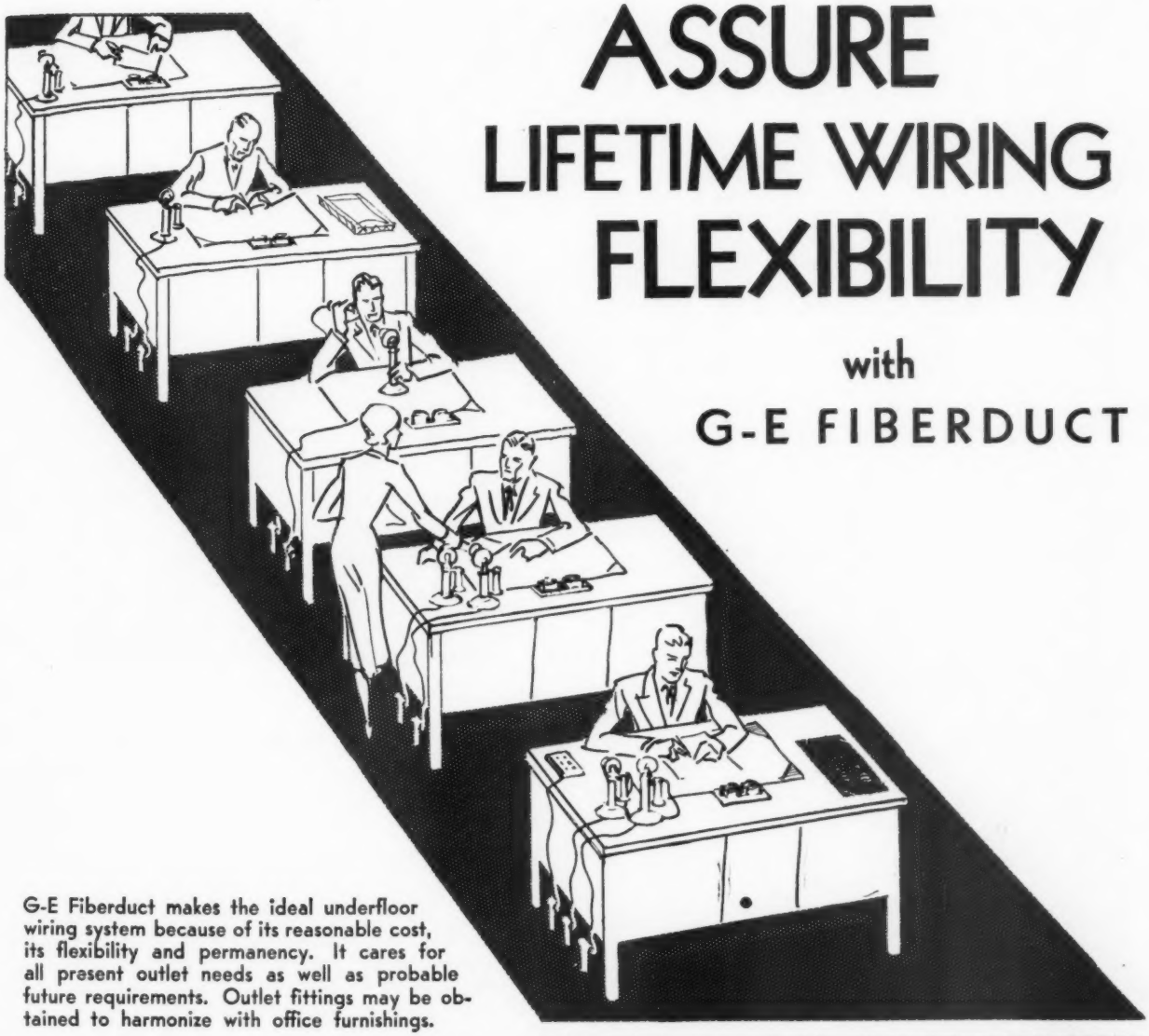
G-E FIBERDUCT



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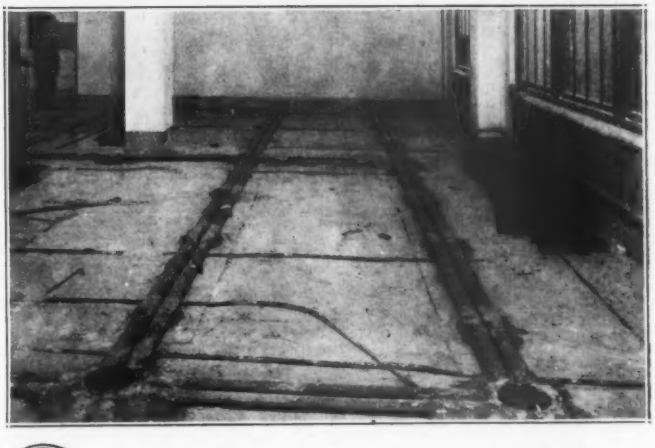

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ARCHITECTURE
ALLIED ARTS

BOOKS

ENGINEERING
BUSINESS ECONOMICS

AN ARCHITECT MUSES

By Wm. Roger Greeley. Published by the Beacon Press, Boston. 98 pages; size 5½ x 8¼; price $1.60

THIS book by an architect whose charm of expression, whose manner of thinking is so typically architectural, furnishes much food for thought. He muses on nine phases of architecture: on architecture as a necessity, a profession, a commodity, a business, a pastime, as the vestal of the crafts, as an inspiration, as a personality and as a prophecy.

What he has to say is nothing to be passed by hurriedly. Rather is it to be carefully considered, to be pondered on, to be used as leading to a greater understanding of and for architecture in its various aspects. It is a book which the thoughtful architect will read and maybe reread before passing it on to his friends.

BUILDING

By J. B. Van Loghem. Published by Kosmos, Amsterdam, Holland. Illustrated; 144 pages; size 7½ x 10; price $3.50

INTERESTING pictures of buildings in Holland together with introductory text giving the philosophy of their plan and design. A condensed translation in French and English of the introduction, which is in Dutch, is included in this volume. The illustrations, which are well printed and well selected, are valuable as showing the modern tendency of architecture in Holland.

Factory in Rotterdam. J. A. Brinkman and L. C. van der Vlugt, architects. From "Building"

Plate from "Building a House in Sweden"

BUILDING A HOUSE IN SWEDEN

By Marjorie Cautley. Published by the Macmillan Company, New York. Illustrated; 48 pages; size 7½ x 8½; price $1.75

NOT a book for architects but for their children, the eight and ten year olds who are fascinated by things done in far away places. The author is a landscape architect who has travelled in Sweden and her story of the building of a little house there—and the part the children played in it—make an interesting tale. The illustrations by Helen Sewell are whimsical and well done.

NEGRO HOUSING

Report of the Committee on Negro Housing, President's Conference on Home Building and Home Ownership, Commerce Bldg., Washington, D. C. Prepared for the Committee by Charles S. Johnson; edited by John M. Gries and James Ford. Illustrated; indexed; 282 pages; size 6 x 9; price $1.15

THOUGH, as stated in the foreword, "the negro's housing problem is part of the general problem of providing enough housing of acceptable standards for the low-income groups in our society," yet this book goes far beyond the discussion of housing as such and examines the negro from the point of credit and desirability as a tenant. Some rather surprising figures are given, based on actual conditions, which indicate that the negro is not nearly so irresponsible as the average white person sometimes thinks. Figures compiled from housing developments for negroes are given, together with general information about their housing, both good and bad.

Some of the subjects covered are the physical aspects

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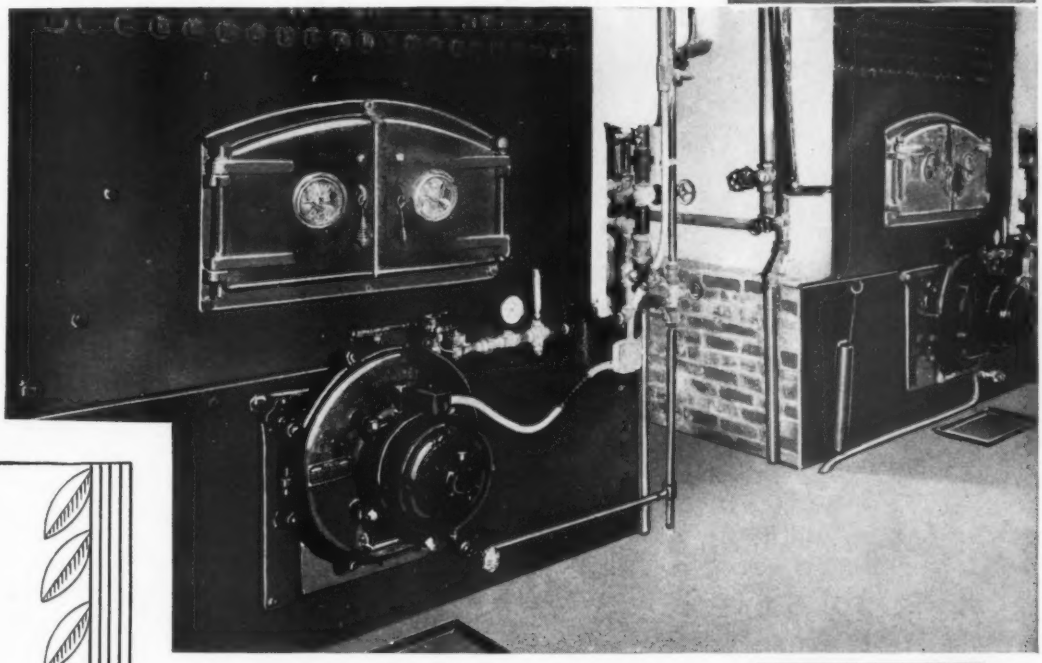

336 West End Avenue, New York City. This new, smart apartment at the corner of 76th Street and West End Avenue, New York, has a heating plant consisting of two low pressure firebox type heating boilers of 130 H.P. each. Each boiler is fired by a Todd rotary type Fuel Oil Burner, burning heavy fuel oil of 12-16° Beaumé gravity.

TODD
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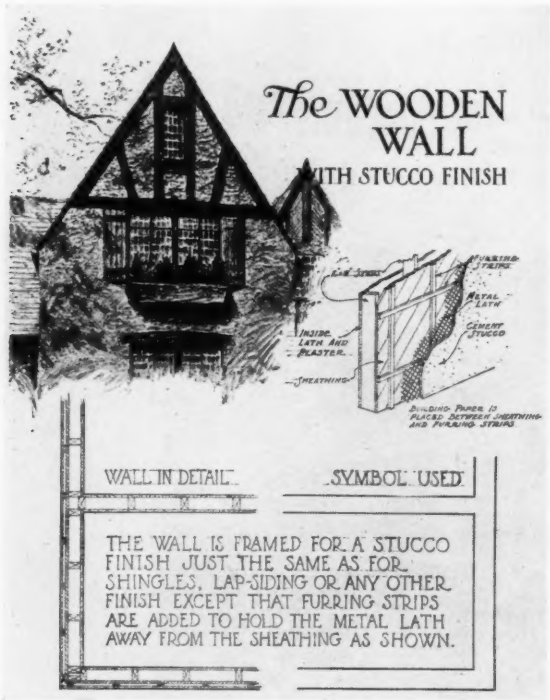
Inner court of Paul Laurence Dunbar Apartments for Negros at Harlem, New York City. From "Negro Housing"

of negro housing, negro housing and the community, social and economic factors in negro housing, home ownership among negroes, financing of negro home buying, housing projects for negroes and various recommendations made by the committee. In many cases, surveys among whites and negroes are compared as an aid to fully understanding the responsibility of the negro and his housing problem.


The WOODEN WALL
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WALL IN DETAIL
SYMBOL USED
THE WALL IS FRAMED FOR A STUCCO FINISH JUST THE SAME AS FOR SHINGLES, LAP-SIDING OR ANY OTHER FINISH EXCEPT THAT FURRING STRIPS ARE ADDED TO HOLD THE METAL LATH AWAY FROM THE SHEATHING AS SHOWN.

Plate from "An Introduction to Architectural Drawing"

AN INTRODUCTION TO ARCHITECTURAL DRAWING

By Wooster Bard Field, A.I.A. Published by the McGraw-Hill Book Co., New York. Illustrated; indexed; 103 pages; size 9 x 12¼; price $2.50

AN unusually interesting book on architectural drawing not only because of the way in which the subject matter is treated, but also because the choice of architectural details shows far better taste than is customary in books of this character. The pencil sketches and drawings scattered throughout the book are also far above average in their technic.

The book is largely a collection of plates showing in pencil form the various exterior and interior details of a house with accompanying methods of indication and construction, as in the plate illustrated. Other types of plate in the book show construction details without the accompanying pencil sketches. Seven pages of pencil sketches of floor plans are included as study problems.

The author is associate professor of engineering drawing at Ohio State University.

THE WEATHERING OF NATURAL BUILDING STONES

By R. J. Schaffer, B.A., B.Sc. Published by the Department of Scientific and Industrial Research, London, England. Illustrated; indexed; 149 pages; size 6 x 9½; for sale in the United States by the British Library of Information, 270 Madison Ave., New York; price $1.08

Exfoliation of Headington Stone. From "The Weathering of Natural Building Stones"

THE results of investigations carried on for some years by the Building Research Station are presented in this book, which discusses the problem of the weathering of natural building stones. Not only the chemistry of materials is discussed but also accidental causes of weathering such as smoke pollution.

Some of the subjects covered in the book are: classification of natural building stones, weathering associated with natural defects inherent in the material, with faulty craftsmanship; with errors in the choice of materials, atmospheric pollution and chemical phenomena associated with weathering, soluble salts as agents of decay, preventive and remedial measures, etc.

MANUAL ON MODERNIZATION

Prepared by the Committee on Reconditioning, Remodeling, and Modernizing, United States Department of Commerce. 41 pages; size 8 x 10½

A TENTATIVE manual for conducting local modernizing campaigns issued by the Department of Commerce is intended to assist cities and towns to stimulate business and employment, help owners maintain their property values, and in general promote community clean-up and beautification. It is based on a study of modernizing campaigns conducted during seven months of 1932 in 65 cities, which reported approximately 49 million dollars worth of modernizing business. The manual includes organization procedure, duties of committees, samples of publicity, modernization checking list, modernization contests, etc.

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New York City

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John Bindrum has chosen a new medium of expression for the illustration on this month's cover—"Through the Trees"—a colorful picture of the rolling country near North Hills, Long Island. Linen material has been used as a surface for colored inks which are applied with a brush, when the linen is damp, over a drawing in black made similar to batik. Mr. Bindrum began painting at the age of fifteen. His work has been exhibited widely.

AMERICAN ARCHITECT

(Trade-mark registered, U. S. Patent Office)

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OCTOBER 1932

Cover—A Water Color by John Bindrum

Books 4

In the Rue St. Julien Le Pauvre, Paris..... 10
By Burton Holmes

The Financiers Should Be Told..... 11
By Benjamin F. Betts

Chicago Architects Develop Ideas to Increase Profits 12
By F. Charles Starr

Le Coq Gaulois Comes Down From Its Perch.... 14
By Samuel Chamberlain

6 Basement Recreation Rooms..... 16

Archaeology—Mostly American 18
By J. Herndon Thomson

Damage Suits Against Architects for Negligence 22
By Clinton H. Blake

Sketches 24
By William C. Ullrich, Taber Hofmann, Wilbur H. Adams, Jane Pelton and Trent Elwood Sanford

What Architects Are Talking About..... 26

Saving Time in the Drafting Room..... 28
By Albert C. Woodroof

Things You Didn't Learn in School..... 30

Small House Shown at Boston Home Show..... 32

The High Cost of Birdseed..... 34
By Charles S. Kyson

Fireplace and Oven in the Perry House, Flushing, Long Island..... 36

As It Looks to the Editors..... 38

Unusual Solutions of Unusual Structural Problems 40
By W. S. Wolfe

Plate Section 43

Readers Have a Word to Say..... 75

Interior Walls and Wall Finishes..... 76

New Catalogs..... 93

New Materials and Equipment..... 95

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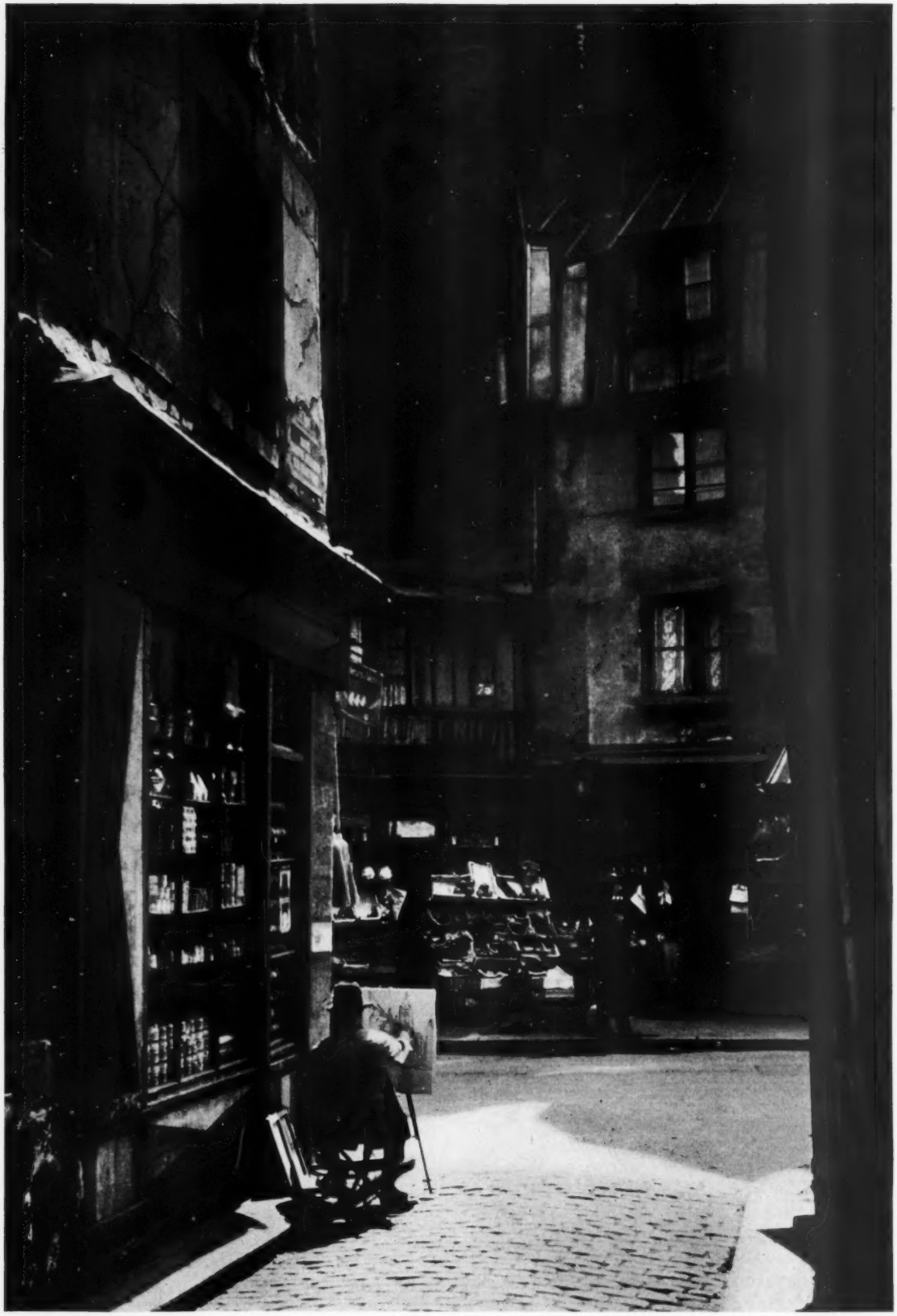

IN THE RUE ST. JULIEN LE PAUVRE, PARIS

A camera study by Burton Holmes from Ewing Galloway

The Financiers Should Be Told

BY BENJAMIN F. BETTS, A.I.A.

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MANHATTAN

AGENCIES that finance the construction of buildings can become powerful factors in furthering the use of the service offered by architects. These agencies should be convincingly told of the economic and protective value of such service.

Architectural service has a definite economic value that lending agencies should recognize and appreciate. It assures the utmost value for the money expended. Through good planning, good construction, good materials, architectural service has a definite economic and protective value. Costly, unsuspected extras can be eliminated through the architect's foresight in providing against construction difficulties and providing for unusual equipment demanded by a specific type of building. The architect's specialized knowledge can save the owner many legal pitfalls. His service can make sure that the right kind of building is built in the correct location.

Through its planning, legal and supervisory aspects, architectural service becomes an essential safeguard to an owner's financial investment. Architects offer an expert, specialized service, the purpose of which is to protect the owner. It is an unbiased service. It is a service that no one else in the building industry is qualified to render.

MONEY makes the wheels of the building industry revolve. Those who control this money are in a position to dictate to those who borrow. When lenders are convinced of the economic and protective value of architectural service they will insist upon owners' engaging a qualified architect.

It has been forecast that the near future will see new methods of financing projects. It is difficult to see how any radical change from present methods can come about. But one that should be — and doubtless will be — made is greater care in making loans on building projects. Building investments must be afforded better safeguards in the future than has often been the case during the past decade.

A properly developed and conducted campaign setting forth the value of architectural service from the investor's and lender's point of view should be launched now. This campaign should be directed toward all lending agencies. It is a type of business building effort that can be conducted nationally or locally or in combination. Correctly handled it would mean more business for architects, more better designed buildings and greater safety to building investments.

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Chicago Architects Develop

Committee Makes Intensive Study That Shows

BY F. CHARLES STARR

General Manager of Schmidt, Garden & Erikson, Architects, Chicago, and Secretary of the Committee Conducting the Investigation

A STUDY of architects' business methods and practices has been completed after a year's work by a committee of Chicago architects. The purpose of this committee, which was appointed jointly by the Illinois Society of Architects and the Chicago Chapter, A. I. A., was to determine how the architect can increase his proper profit without sacrifice of service to clients or loss of professional dignity. The more important points in this study cover fees, cost accounting, shop drawings, owner-architect contracts, copies of drawings and specifications, damages for delays, charge for changes, and office efficiency. The recommendations of the committee follow.

FEES

THE most natural suggestion as to the best way to increase profit is to increase the fee for architectural service. But to raise fees now is entirely contrary to the trend of the times. A study of existing schedules of proper minimum charges indicated much to be desired by way of change—primarily to present the matter more frankly and clearly to owners and thus show present fees to be fair and proper. Three ways of determining fees were recognized: first, a fixed pre-agreed fee plus the actual cost to the architect for executing his work. Second, an agreed minimum total lump sum. Third, a percentage of the cost of the work.

The committee considered a proper minimum fee based upon a percentage of the cost of the work for complete architectural services for various types of average buildings to be as follows.

Group A: Industrial and mercantile buildings, factories, office and governmental buildings: costing over $1,000,000, 5%; costing under $1,000,000, 6%.

Group B: Schools and colleges, apartment buildings, hotels and clubs, banks, governmental and office buildings, theatres and libraries: costing over $200,000, 6%; costing under $200,000, 7%.

Group C: Hospitals and churches; costing over $500,000, 7%; costing under $500,000, 8%.

Group D: Residences: 10%

Group E: Alterations: 10%.

Group F: Landscaping: 12%.

Group G: Interior decorating and furniture monuments and memorials: 15%.

When computing the amount of the architect's fee, this fee, traveling expenses and salary of architect's superintendent should not be included in the "cost of the work." No reduction should be made from the architect's fee on account of (a) use of old materials, (b) items furnished by the owner, (c) penalties, liquidated damages or other sums which are withheld from payments to the contractors, or (d) "savings" under any contract resulting at least in part from the efforts of the architect. In case of the abandonment or suspension of all or part of the project, the architect should be paid proportionately for whatever services he may have rendered.

When drawings and specifications are completed and approved by the owner, if the total of bids exceeds the amount the owner then wishes to spend and the architect makes changes in drawings and specifications to secure lower bids on a revised basis, the architect should be paid 75% of his basic fee, based on the total of original low bids received, and 25% of his basic fee based on the cost of the work as finally contracted for, plus three times the labor cost of making the changes.

Payments on account of architect's fee should be made monthly. A guide to indicate the total fee due at various times is as follows: Total of 30% on completion of preliminary studies, total of 70% when working drawings and specifications are completed, total of 75% when bids are received and recommendations made for awards of contracts, total of 80% on completion of large sized and full sized details and the remaining 20% in proportion as the work proceeds. The complete total, including any extras due the architect, should be made payable on completion of construction.

If additional services are furnished, the architect should be reimbursed therefor as follows:

(a) Continuous supervision by a full time superintendent: Salary plus 10%.
(b) Changing drawings, specifications, or contracts, after once approved by owner: 3 times the labor cost.
(c) Transportation and living expenses, while traveling in discharge of duties connected with the work: Charge at Cost.
(d) Telegraph and long distance telephone calls, necessary to expedite the work: Charged at Cost.
(e) Checking shop drawings and other necessary additional services, if separate trade contracts are let: Basic fee increased 4%.
(f) If construction work is executed on a cost-plus-fee basis: Basic fee increased 2%.
(g) If architect is put to labor or expense by reason of delays caused by the owner or the contractor, or by the delinquency or insolvency of either, or as a result of damage by fire or other casualty, he is to be equitably reimbursed for such extra services and expense.

XUM

Ideas To Increase Profits

"Profit Leaks" and How to Avoid Them

(h) Blueprinting of an unusually large number of plans and specifications for securing bids. (Reasonable number should be agreed on).

(i) Where heating, ventilating, sanitary, mechanical, or electrical problems are of such a nature as to require special attention, an additional fee of 2% of the cost of the trades involved should be added to the basic fee.

(j) Special services such as process or acoustical engineering, water color or crayon perspectives, special drawings for renting purposes, etc.: Charged as agreed upon.

In commenting on the schedule of charges, the committee recommended that a complete list of services to be furnished by the architect should be given the owner included in a revised schedule of proper minimum charges or a special memorandum, together with a statement indicating just what supervision is to be furnished.

COST ACCOUNTING

ONE cannot study the question of architect's fees without realizing the deplorable general lack of proper cost accounting. How can an architect increase his profit if he does not know where his costs are excessive or where he is losing money? The cost of keeping a reasonably detailed cost record is surprisingly small when actually in practice. The objection often raised that some items of expense cannot be specifically allocated, while partly true, is not justification for having no record.

A cost record should be kept of every job, the time of every man in the office being allocated each day to proper jobs or to some branch of overhead. Salaries should be charged against each partner as an item of cost production before profits are considered. Miscellaneous items such as blueprints, travel, telephone, etc., should be charged against proper jobs or branch of overhead; other items such as rent, light, heat, sick leave, vacation, etc., should be proportioned.

If a uniform accounting system were used generally in architects' offices, it would be helpful for the sake of comparisons.

CHECKING SHOP DRAWINGS

POSSIBLY one of the largest items of reducible expense in an office is that of checking shop drawings. One may say that the architect must check them in order to be sure that he gets what he wants and that all trades fit together. This is a fallacy—grown up from usage.

Architects should not check shop drawings, for the architect's duty is done when he shows by plans and specifications what he wants accomplished. A general contractor is paid a fee to completely construct a building as planned and specified; one essential in that work is to properly correlate the work of all his sub-contractors. The architect should merely look over the shop drawings to make sure that his design has been followed, for the contractor or his sub-contractors should not only make proper working or fabrication drawings but should also see that they fit the work of other trades. Moreover, better bids will result if individual initiative and experience of tradesmen are secured through encouraging their own methods of fabrication.

It is suggested that a paragraph be included in the general conditions of the contract requiring that the contractor, before forwarding a shop drawing to the architect, shall certify by a stamp or letter that he has carefully checked it, that it conforms to the contract, and that it will not cause conflict with other trades.

With the increasing complications of modern construction, the minute detailed checking and rechecking of shop drawings by the architect, often without even the cooperation of the contractor, has come to be a considerable burden and it is believed that the present procedure is wrong and should be corrected. The one cautionary remark that should be made, naturally, is that the architect should always be sure that his contract drawings and specifications do show clearly what is to be accomplished, and never to specify the impossible.

OWNER-ARCHITECT CONTRACT

A WRITTEN agreement of some kind should always be secured before any work is done. If not willing to sign a complete service contract at the start, the client should sign an agreement to pay a certain sum for a preliminary study or whatever work he may want done with a proviso that if and when he decides to actually proceed with construction, he will then sign a complete service form of contract.

COPIES OF DRAWINGS AND SPECIFICATIONS

TO prevent unwarranted duplication of drawings and specifications, it should be agreed in the owner-architect contract as to how many copies will be furnished by the architect. If more copies are requested, they should be paid for by the party ordering them, be he the owner, bidder or successful contractor.

DAMAGES FOR DELAY

UNJUSTIFIED expense to the architect is occasioned when construction work is delayed an unexpected and unreasonable length of time. If operations are slowed down or temporarily stopped, the owner should reimburse the architect, provision for this being made in the owner-architect contract. The architect's fee is based on the assumption that construction work will proceed at a reasonable rate of speed for, after construction starts, it costs more, for example, to have an active job in an architect's office for two years instead of one year. (*Continued on page* 86)

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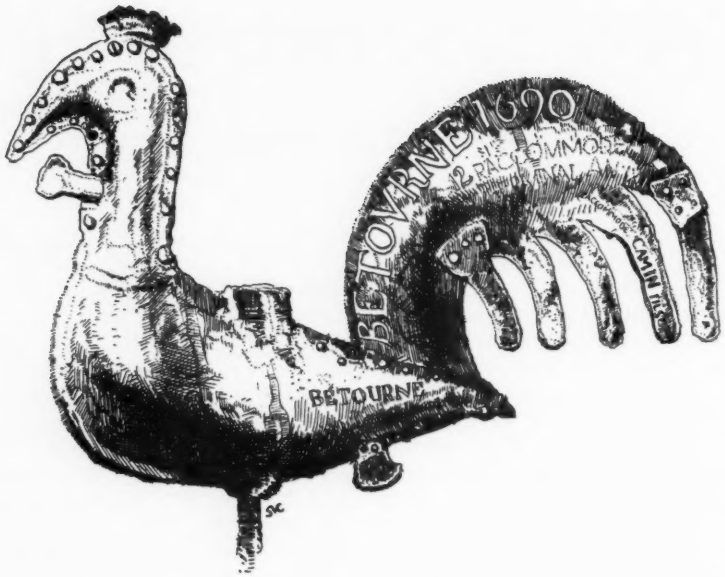


Le Coq Gaulois Comes Down From Its Perch

BY SAMUEL CHAMBERLAIN

MANY an inhabitant of the quiet town of Senlis was startled by strange visitors this spring. For days the ancient cobbled streets of the town resounded with the footsteps of four festive stone masons carrying a strange time-stained object on their shoulders. At every doorway the cortege stopped while the leader of the quartet pulled the bell cord and proudly displayed the object to a surprised housewife, meanwhile hinting broadly for a tip. For the strange object was the weathercock from the cathedral spire, and a tradition dating back for centuries specifies that, whenever the peak of the cathedral has been reached by a steeplejack, the weathercock may be taken down and shown from house to house with the unwritten understanding that a "pourboire" is in order. One can hardly say that the custom has been abused, for this is the bird's first descent in 120 years!

The French Government is now making thorough repairs on the venerable south spire of the cathedral, and a thick screen of scaffolding has gradually cloaked its graceful lines. Toward the end of April the scaffolding achieved the extreme peak of the tower, and the "coq Gaulois" came down for his brief visit, amid much ceremony. The present work is carried on by the most expert archaeologists and master masons on the Government staff, and promises to be long and arduous.

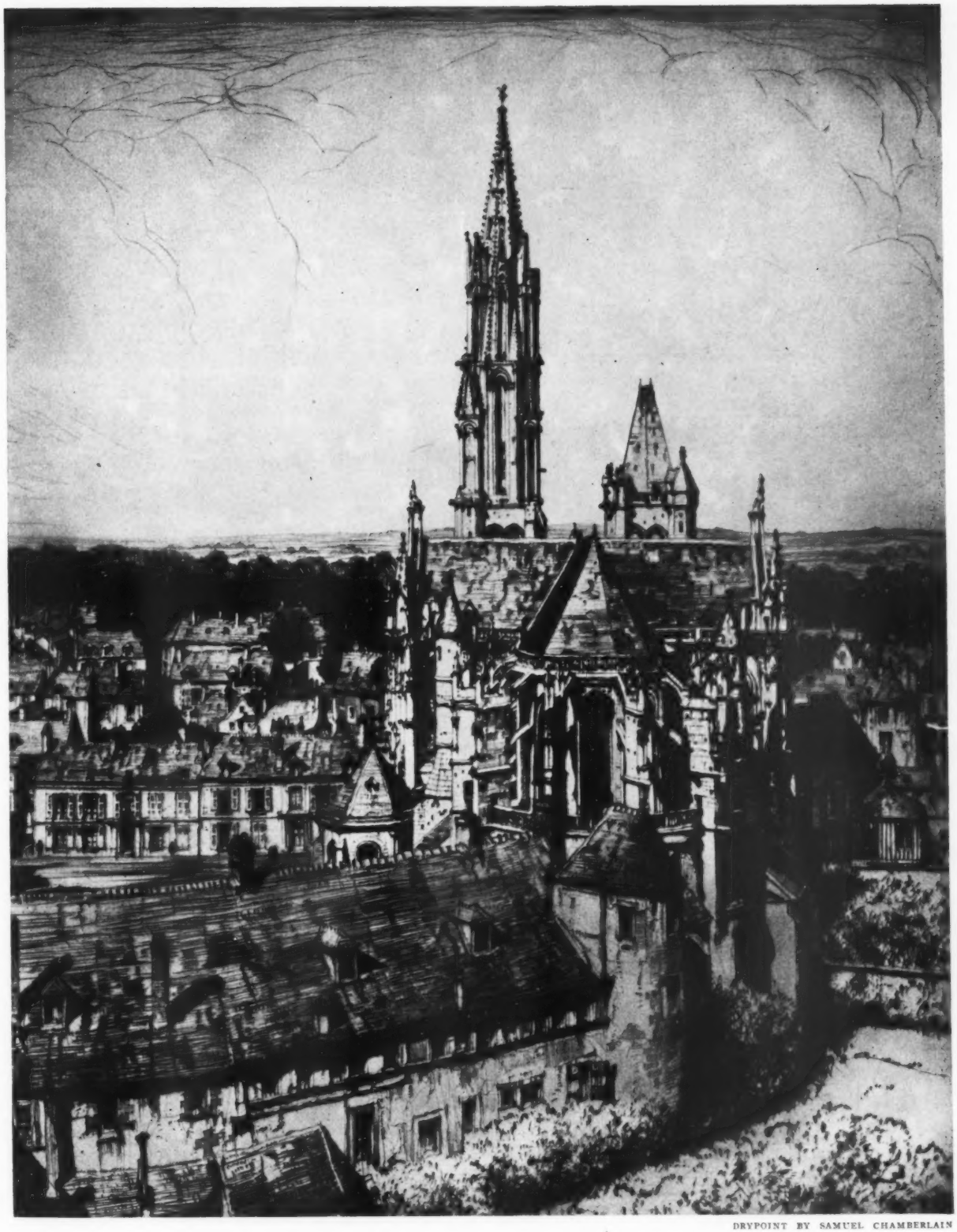
The tower was finished around 1230-1250. Seven centuries of northern French climate have left their mark. Many a crucial keystone sags. Eight German projectiles hit the tower in 1914, and if they caused no actual collapse, they shook the ancient joints badly.

The aged weathercock seems a bit defiant on his lofty perch, but at close range he loses all ferocity. He becomes a rather droll creature, resembling the inflated rubber birds on which aquatic playboys are wont to disport themselves at Atlantic City. About three feet long and 20 inches high, he is cast in copper and weighs a good forty-five pounds. Different inscriptions on his battered sides indicate that he has undergone several surgical operations in recent centuries. Here is the list, carefully engraved on the greenish copper:

BÉTOURNÉ 1690
RACCOMMODÉ PAR CAMIN FILS
RACCOMMODÉ PAR TOUSSAINT-BÉTOURNÉ 1751
ET JACQUES GUIL, SONNEUR.
BÉTOURNÉ 1769
RACCOMMODÉ PAR LE PÈRE BÉTOURNÉ
GERMINAL AN IX
VICTOR LEMAIRE 1808
MA TETE A ÉTÉ RACOMMODÉ PAR NICOLAS
BÉTOURNÉ 1810.

The constant repetition of the name Bétourné is evidence that the care of the weathercock was entrusted to one family of artisans, and passed on from father to son to grandson. The name still persists in the locality, but the Bétourné's are now less adventurous. They are all farmers.

Twice in recent history an audacious alpinist has succeeded in climbing up the spiny surface of the spire as far as the rooster, without the aid of ropes or scaffolding. In June, 1731, an innocent-looking young man obtained permission to climb (*Continued on page 86*)



DRYPOINT BY SAMUEL CHAMBERLAIN

IT TOPPED THE CATHEDRAL OF SENLIS

Whenever the weathercock comes down from its perch on the cathedral spire, the owner-for-a-day proudly takes it from house to house with the understanding that a "pourboire" is in order

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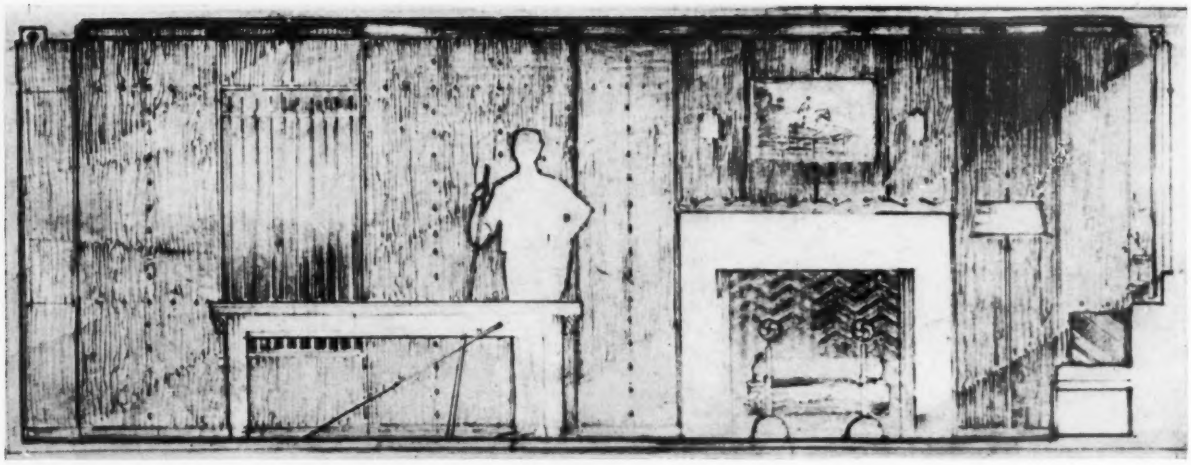
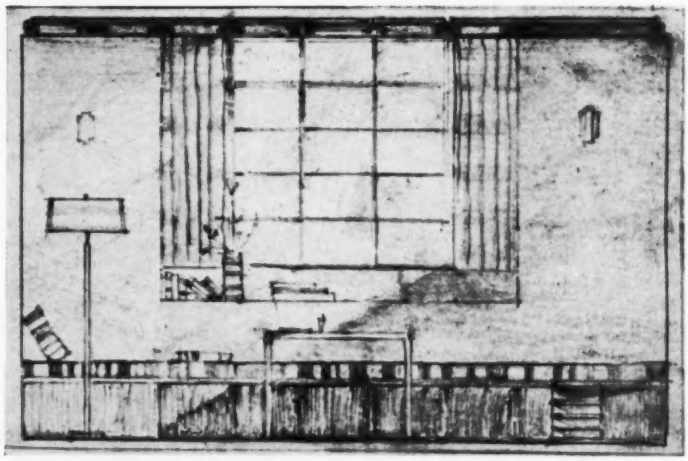




FIRST PRIZE

William H. Harrison and Walter C. Myall,
Los Angeles, California

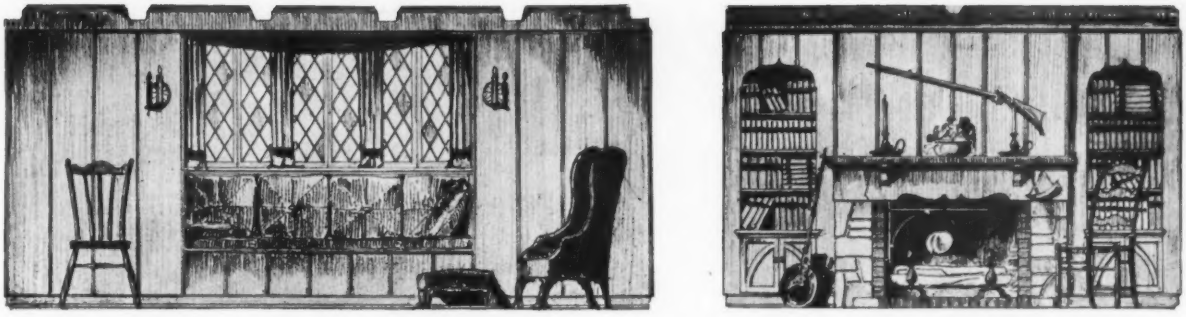
SECOND PRIZE

(Below) Arthur S. Davis, Chicago, Illinois

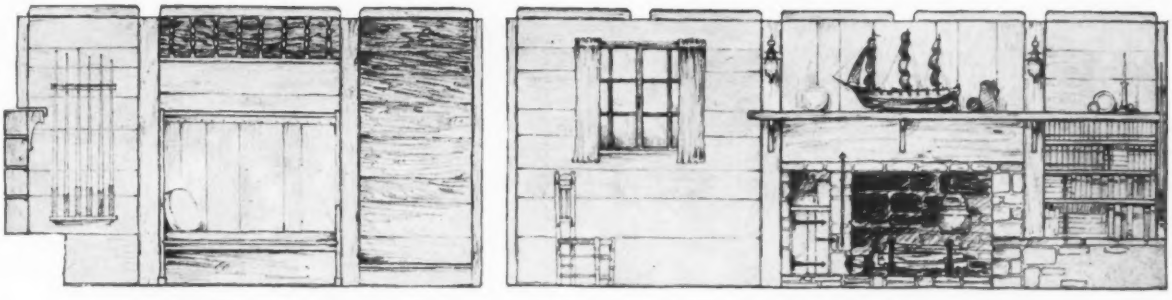
6 Basement Recreation Rooms

Prize Winning Designs in Class Two of the Contest Conducted By the Douglas Fir Plywood Manufacturers

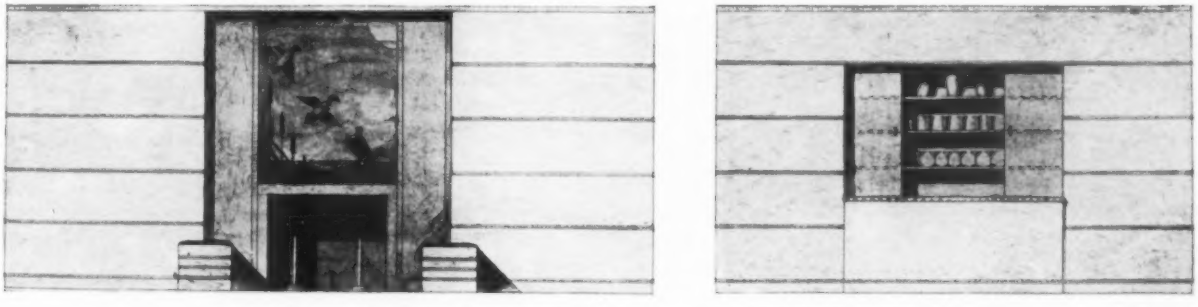
AWARDS in the contest were based on two considerations: the attractiveness and good taste of the design itself, and the extent to which it adopted the natural advantages of Douglas Fir plywood—large sizes, split-proof and warp-resistant strength and low surface cost. The professional advisor was Charles H. Alden, F.A.I.A. Judges were A. L. Loveless and D. J. Myers of the Washington State Chapter, A.I.A., and G. L. Bartells, research director of the Douglas Fir Plywood Manufacturers



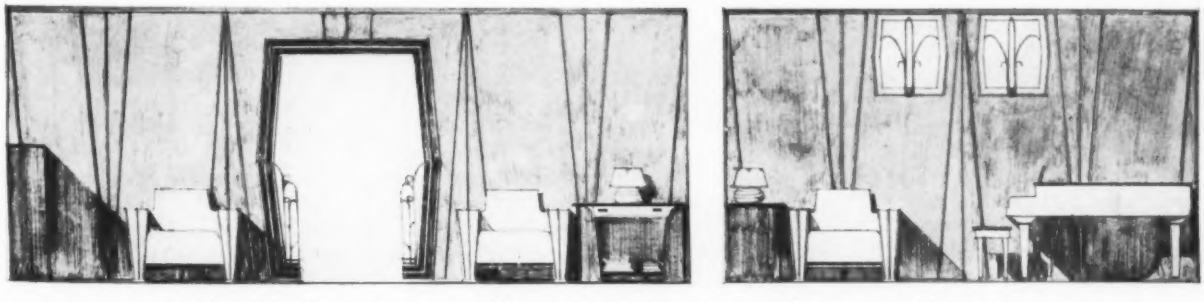
THIRD PRIZE . . . Herbert E. Duncan, Kansas City, Missouri



FOURTH PRIZE . . . Howard G. Elwell, Bell, California



FIFTH PRIZE . . . Arnold I. Lorenzen, Curtice, Ohio



SIXTH PRIZE . . . Alfred F. Schimek, LaGrange, Illinois

XUM

ARCHAEOLOGY, Mostly American

BY

J. HERNDON THOMSON

Head of the School of Architecture,
Tulane University

Photographs by Dan Leyrer

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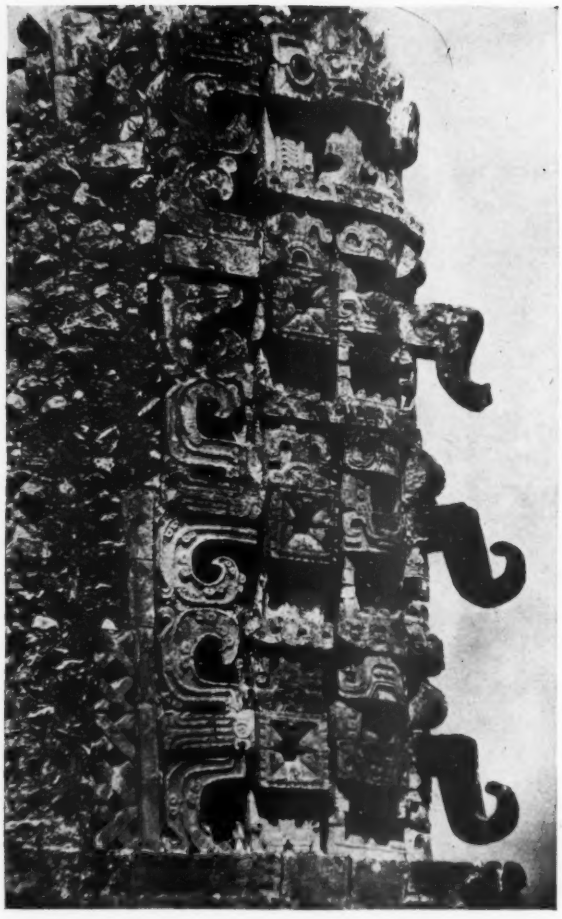

At right: Corner masks, Monjas Quadrangle. Vivid color was used with high relief and deep undercutting

HAVE you ever known the magnificent breath-taking rush and leap of a tarpon on your line? Have you ever fought an eight pound bass into submission with a four ounce rod? Do you know the healthy ague of buck fever? Have you ever started in to clean, in an ancient Maya temple, an area of stuccoed wall black with a thousand years' accumulation of dust and smoke, and seen emerge the remains of a fresco painted before the first stone of Notre Dame was laid, and obscured and forgotten before America was discovered? I can conceive of no greater emotional excitement than this last. Certainly I have never experienced any sensation remotely comparable to it.

There are few remote places in the world today that have not given up their secrets to the geographer, but to the archaeologist there still remains a vast territory, its wells untapped, its treasures still buried.

Archaeology, as a more or less definite interest in and study of ancient civilizations, their architecture, sculpture, painting and minor arts, dates from the renaissance. Archaeology as we know it today, an art and a science, meticulous in all its methods, is little more than a century old. Even in the early years of this late period the methods of archaeologists, when compared with those of today, were crude and inexact. This is in some measure attributable to the lack of what is now considered necessary mechanical equipment, such as the cameras, precision instruments for measuring and weighing, and chemical cleaners, solvents and preservatives.

The early archaeologists were essentially collectors, many of them, let it be frankly confessed, collectors in much the same sense as were Jean and Pierre Lafitte, Dominique You and the redoubtable Captain Kidd, their interest centering largely around objects of high esthetic value.

It is impossible to present here an adequate resumé of the work accomplished by the early classical archaeologists, or even to list the outstanding figures engaged in archaeological research. Such a summary would be boresome and inadequate—covering ground with which we are familiar. However, certain names present themselves insistently with the idea of classical archaeology. Such men as James Stuart, Nicholas Revett and Lord Elgin and later Layard, whose work at Nineveh made possible the deciphering of cuneiform, Sir Charles Fellows, Wood, Newton, and Professor Flinders Petrie, who was first to point out the vital necessity for meticulous recording of all information.

Having vaulted nonchalantly over several hundred years of archaeological development, from the period when the gentle archaeologist returned to his native land with everything that he could find that wasn't screwed to the site, to the present period of archaeology as an exact science with all the resources of chemistry, physics, art, architecture and sculpture at its command, let us glance at the organization now conducting archaeological in-

DETAIL OF MONJAS QUADRANGLE, UXMAL

Mask from the east building. The lattice work is of stone, the face of the lattice being a light yellow ochre with diamonds in dark red. The horizontal bars are conventionalized serpents, each terminating in a serpent's head

Rendered detail by J. Herndon Thomson

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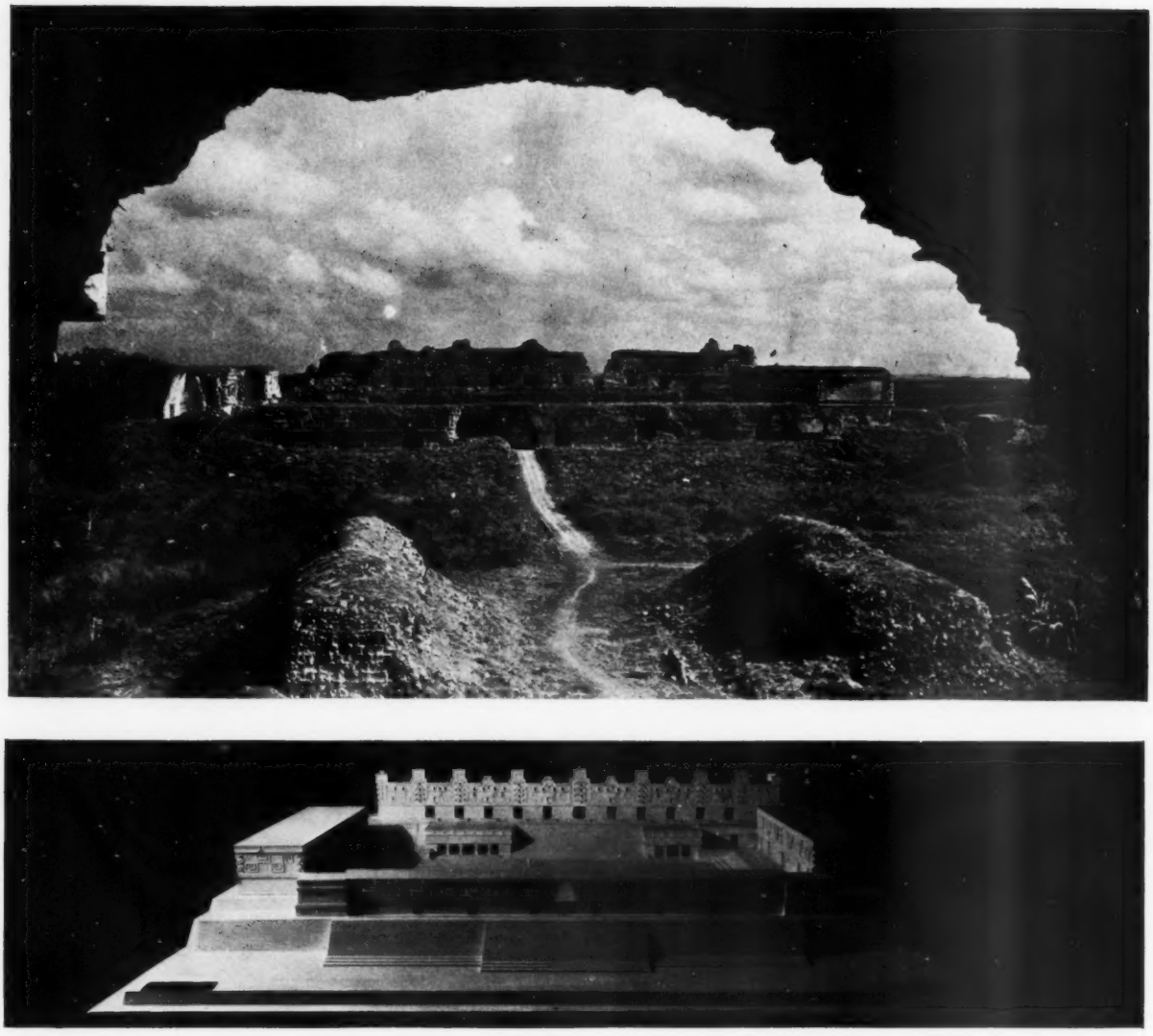

Ruins and reconstruction of Monjas Quadrangle, Uxmal. Remains of the forecourt are shown in the foreground. Reconstruction by Frans Blom. Model by H. M. Fair and Gerhardt Kramer

vestigations and at the areas offering greatest promise to the investigator.

There is at present archaeological work under way in most of the open fields throughout Europe, Asia and Northern Africa. In America, besides the work being carried on by the various states, each state of course in its own territory, there are any number of endowed organizations, universities and individuals conducting archaeological investigations extending from the Canadian border well through the length of South America. Such government controlled and financed investigations are being conducted by the United States, Mexico, Guatemala, Chile, Brazil and the Argentine.

Of the various fields now open to the archaeologist, Middle America holds, I think, incomparably the most promise. Where Egypt numbers her pyramids by tens, in Mexico, Guatemala, British Honduras and Yucatan there are literally hundreds, and while a great amount of work has been done in that field in the last few years, the field is so vast that it remains practically untouched. There are any number of ruined cities in this area about which practically nothing is known archaeologically beyond mere location, and undoubtedly there are a great many more buried in the jungle which are known only to the "chicleros" or not at all. While classical archaeology is primarily engaged in confirming legend and history, American archaeology is unfolding a completely unknown saga of plagues, wars and migrations.

In America, Mr. J. L. Stevens was intrusted, in 1841, by the United States Government with a diplomatic mission that carried him over a large part of Central America, Mexico, Guatemala, Honduras and Yucatan. Around this trip Mr. Stevens wrote and published, in 1843, "Incidents of Travel in Central America," the first book written in English touching on the ruined Indian cities of Central America. Although a large part of the descriptive matter in this book is given over to the country, the lives of the natives and the extreme difficulties of travel in that day, Stevens visited and described in detail numerous ruins, among them Palenque, Copan, Ux-

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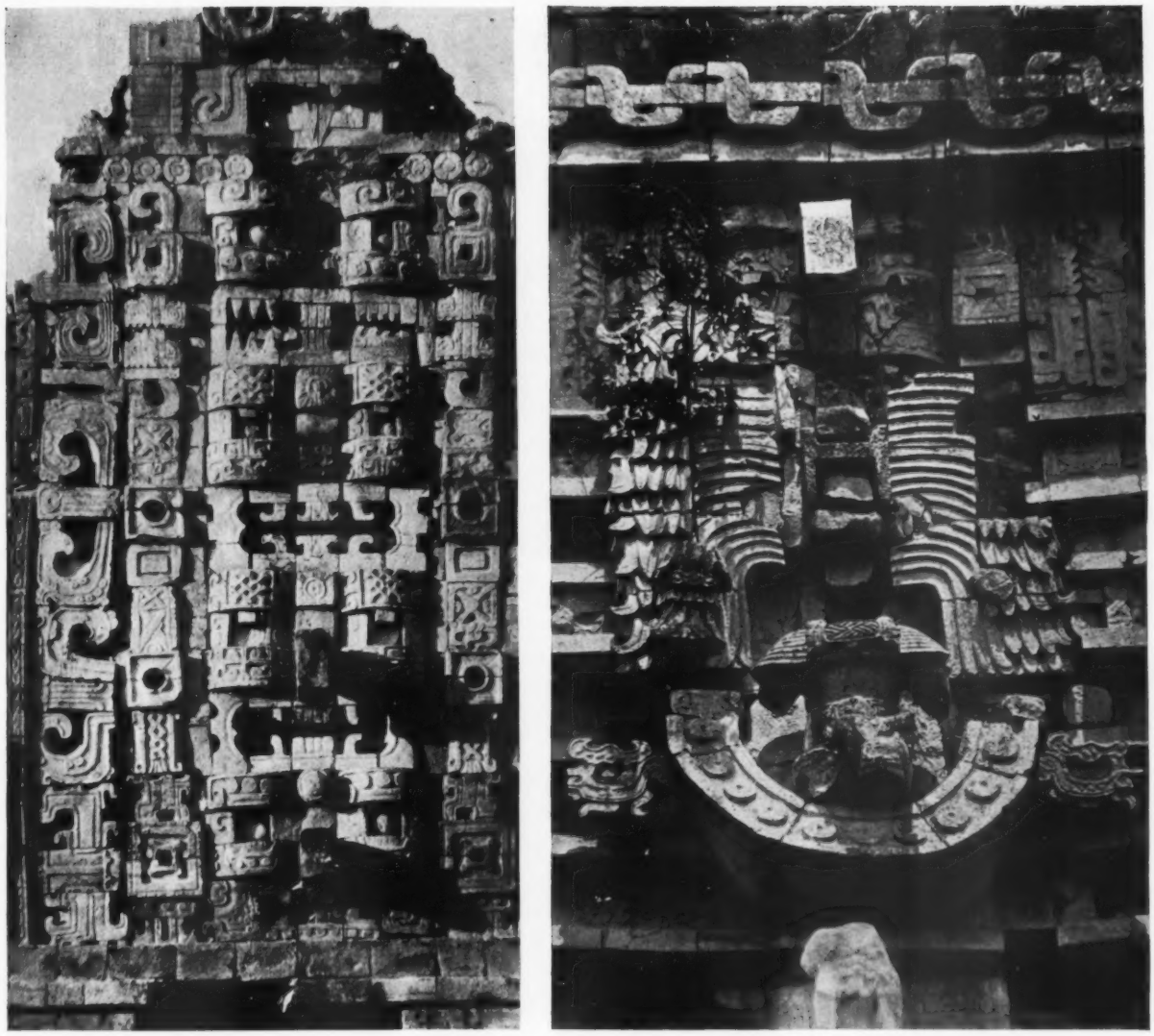


Masks of Ku Kul Kan, Monjas Quadrangle, over doorway of north building, and detail from the House of the Governor. Typical of the wealth of detail to be found in Maya buildings

mal, and Chichen-Itza. It is a grand book, written by an able and close observer, and most excellently illustrated by the fine engravings of Mr. Catherwood. The text is naive to a degree and in places very amusing. Stevens, as an accredited representative of the American Government, was accorded certain official honors of the opera bouffe type. Quoting Mr. Stevens, "To crown the glory of the parting scene, my good friend, Captain Hampton, had charged his two four-pounders, and when the steamboat got under way he fired one, but the other would not go off. The Captain of the steamboat had on board one puny gun with which he would have returned all their civilities; but as he told me, to his great mortification, he had no powder."

Following Le Plongeon, one of the most versatile of archaeologists in the Middle American field, was Senor Juan Martinez. Possessed of a wide knowledge of the Maya language and a sympathetic understanding of the native, he was at the same time an outstanding authority on Maya Archaeology and beloved alike by Indian, Spaniard and American. Other pioneers in the Middle American archaeological field include E. H. Thomson, acting for the Peabody Museum, T. A. Willard, both Americans, and a German, Teoberto Maler. Some ten years ago the Carnegie Institution founded a permanent camp at Chichen-Itza, and, under the leadership of Dr. S. G. Morley, a tremendous amount of excellent work has been accomplished, the most spectacular of which is the fine reconstruction of the Temple of the Warriors; the reconstruction being under the immediate direction of Earl H. Morris.

Some progress has been made in the translation of Maya glyphs. Date glyphs can now be read with assurance, although there is still some disagreement among archaeologists as to the correlation of the Maya and Christian calendars, but beyond that not a great deal of translation has been accomplished. And, as a result of the activities of that bigoted old cleric, Diego de Landa, first bishop of Yucatan (1573-79), the chances of finding a Maya Rosetta stone are (*Continued on page* 88)

XUM

Damage Suits Against

How to Prevent Them and What

BY CLINTON H. BLAKE

of the New York Bar

THE responsibility of the architect for mistakes, errors, omissions and other forms of negligence is a matter of increasing importance to the profession. Hardly a month goes by that some new phase of the problem does not develop and some new case come to my attention involving a claim against an architect for damages based on his alleged negligence.

Generally speaking, the responsibility of an architect for negligence is substantially the same as that of any other professional man. Like the lawyer and the doctor, he is presumed to be skilled in his profession and to be ready and prepared to use that skill in behalf of his client. If he accepts a job and does not fulfill it with the skill and care required, he is liable for any damages caused to the client by his failure to do so. This does not mean, however, that he is supposed to have extraordinary skill and ability or to exercise extraordinary care in his work. It means simply that he must exercise that degree of care, diligence and skill which the ordinary architect —rather than the architect of exceptional ability—is presumed to have.

For example, if he is engaged to supervise the work and fails to do so or if his supervision is purely perfunctory or casual and some defective work is done in consequence, he will be liable. On the other hand, if he does give to the work the ordinarily required degree of supervision and nevertheless some defective work escapes him, he will not necessarily be liable for the damage which it occasions to the owner. He is not required to see that every bolt is put in place or every beam properly set or every stone properly bedded.

There is naturally no phase of the practice of his profession in which an architect is more vitally interested than this question of his financial responsibility for errors or neglect. This responsibility may conveniently be considered under three headings, namely, the design proper, the specifications and the supervision. The ordinary care and skill to which I have referred must be present and exercised with respect to each of these phases of the architect's work.

THE DESIGN . . . There is less danger of the architect incurring liability for negligence in connection with the design proper than in connection with either the specifications or the supervision. Subject to legal refinements which can not be discussed here, it may be taken as a general rule that the responsibility of the architect for negligence in design will attach, not to the artistic result or lack of artistic result secured by the design, but rather to his failure to use proper care or skill on the more practical details of design, such as indicating on the plans a proper and efficient layout for drains, providing supports and framing of proper strength, details for the setting of doors and windows to prevent leakage and the like.

The fact that the client does not like the artistic effect of the house when built or objects to the elevation, or that the client's wife complains of a lack of proper closet room or a lack of efficiency in the kitchen arrangements, may result in the loss of a client, but will not serve as the basis of a valid damage claim against the architect.

On the other hand, if the architect indicates on the drawings beams insufficient to safely carry the strain called for or omits to indicate necessary space to be reserved for drain pipes or makes no provision for flashing where it should appear upon the plans, then the owner may well base a claim for damages on the failure of the architect to provide for any one or more of these items. The plans must be read in conjunction with the specifications, however. If a defect existing in the plans is cured by the specifications, the owner would have no just complaint. For example, if the plans did not show any flashing where there should be flashing, but the specifications contained such a broad provision under the flashing heading as to require it to be done by the contractor, the owner would not suffer any legal damage.

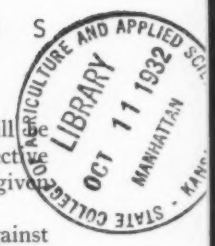
FOLLOW OWNER'S INSTRUCTIONS

IT is not to be assumed, from what I have said of the lack of liability in matters of pure design rather than structure, that the owner is without any recourse against the architect where the latter deliberately departs from his instructions or fails to provide for a result which the owner has specified must be secured. As a rule a claim of this kind does not arise because the owner is present and sees what is being done, can step in and protest and is under no obligation to approve the plans unless he likes them. Given a situation, however, where the owner, due to illness or absence, trusts the architect to proceed, and the architect fails to follow instructions, the owner may have a claim for damages, although even here it will be difficult to establish actual concrete damage rather than an unliquidated esthetic damage.

THE SPECIFICATIONS . . . In writing the specifications and in supervising, the architect must definitely watch his step. If the specifications are not properly drawn so as to make the building structurally correct, to give the proper specified finish, to prevent leakage in cellar and walls and roof and generally to provide a workmanlike job, the owner will have a valid claim directly against the architect. The builder in the majority of cases will be

Architects for Negligence

To Do If Trouble Develops



protected, if he follows the specifications, and the architect who has failed to prepare proper specifications will be the one who will be held liable. Probably ninety-five per cent of all cases of claims by owners against architects are based on the ground that he has been negligent with respect either to the specifications or supervision.

Every architect with any substantial experience will realize the importance of the specifications to the client. He should realize equally their importance to himself. An architect who writes a defective specification incurs substantially the same liability as a lawyer who prepares a defective will or contract, or a doctor who negligently performs an operation. A really good specification writer is a rare prize to be cherished and retained at all hazards. The few dollars which will be saved in the salary of a second-class specification man may be lost a hundredfold in the payment of damages to a client because of the failure of the specifications to provide, where necessary, for flashing on roofs, around doorways and windows, for proper waterproofing and drainage or proper heating, plumbing and structural requirements and a dozen other similar items that will suggest themselves to every experienced architect.

If I were to choose the two points which I consider the most likely to give rise to damage claims based on defective specifications, I should unhesitatingly select those dealing with flashing and foundation waterproofing and drainage. Case after case has come up in my practice involving claims for damages against the architect for a failure properly to provide requisite flashing and properly to provide against leakage in the cellar.

Much can be done to minimize these dangers, if, in addition to the regular specification clauses dealing with these matters, there be included a general clause of wide scope, providing in substance that, whether or not shown on the plans or provided for specifically elsewhere in the specifications, the builder shall provide and perform any and all work necessary to make the house absolutely water-tight throughout. The presence of a properly worded clause of this kind and its use as a standard in all specifications will go a long way toward removing the threat of damage suits, and toward placing the architect in a position where he can successfully defend claims of negligence in the preparation of the specifications.

SUPERVISION . . . Here again is a fertile field for damage claims against the architect. As I have already indicated, the architect is under no obligation to see each nail driven and each timber put in place. If supervision of that kind is desired, it is incumbent upon the owner to secure the services of a clerk-of-the-works.

This does not mean, however, that the architect is not under a very definite and real obligation with respect to his supervisory services. If he skimps those services, if he does not attend at the job reasonably often, either in person or by a competent representative, he will be liable for the damage caused to the owner by defective work which he might have discovered, had he given reasonable and proper supervision.

The fact that the owner may have a valid claim against the contractor for failure to follow the requirements of the plans and specifications will not relieve the architect of his liability for the damage caused by this failure. In many cases the architect will escape actual loss in a case of this kind because the natural course is for the owner to proceed against the builder, both because he will have the backing of the architect in doing so and because the builder in many cases has behind him a surety company or other bondsman.

It is far more difficult to fasten a legal liability upon a professional man than upon a general contractor. In the case of a professional man, it is necessary to prove negligence, whereas in the case of the contractor, it is necessary merely to prove that he has deviated from the terms of his contract to the damage of the owner. Nevertheless, the architect will do well to keep his own house in order and not trust too much to the probability that any such damage will be made good by the builder and that the owner will be content to look to the builder rather than to the architect.

EXTRA CARE TO AVOID LITIGATION

LAWSUITS are unpleasant and expensive things—expensive in time as well as in money, expensive often when one wins, as well as when one loses. A little thought and caution applied in the first instance, a little extra care taken to see that the essentials of construction are properly covered by the plans and by the specifications, as well, and the giving of a little more supervision than the minimum required will yield substantial dividends in the avoidance of litigation and of liability for damages.

Every architect knows how often it is that the client will claim that the architect has been guilty of some neglect or omission. In the vast majority of cases these claims are trivial and rarely of a substantial character. They usually take the form of complaints that the closets are too small or sufficient shelving is lacking or there is insufficient book or furniture space. In cases of this kind there is no real danger, ordinarily, of the complaints taking the form of serious claims for damages or lawsuits. The architect can decide how far he wishes to go in satisfying the client, and will often assume the expense of meeting the client's wishes in order to retain his good will.

Now and again, however, the complaints are of a more serious character, either because there is real basis for a claim of substantial damages or because the client is temperamentally difficult to deal with and inclined to make real trouble. It is not (*Continued on page* 90)

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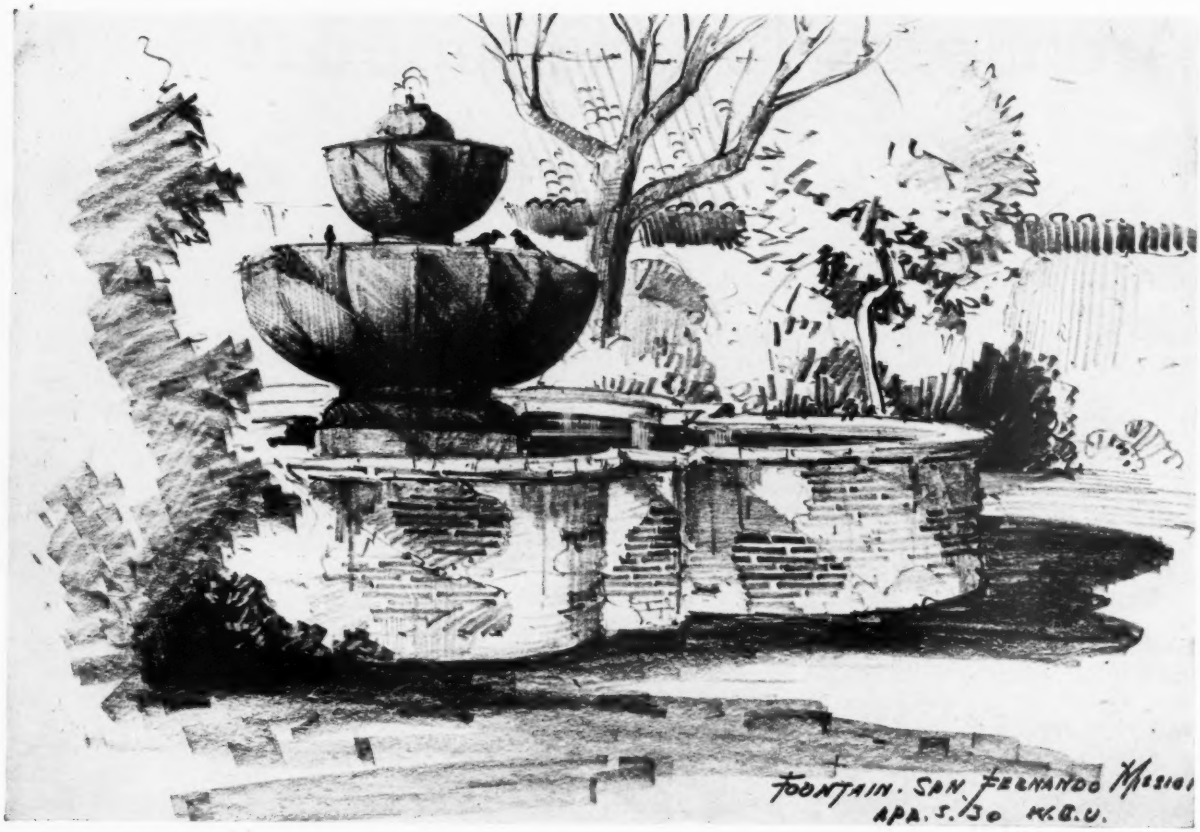
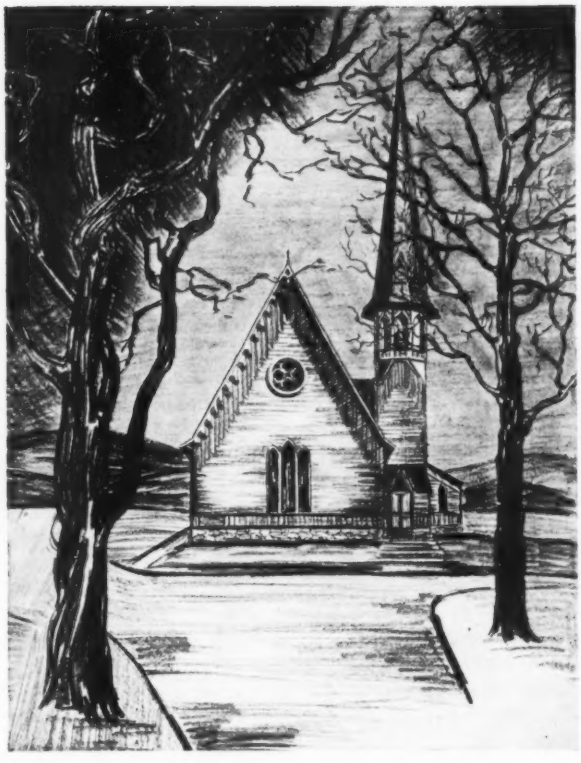


FOUNTAIN

By William C. Ullrich

ROCK CRUSHER

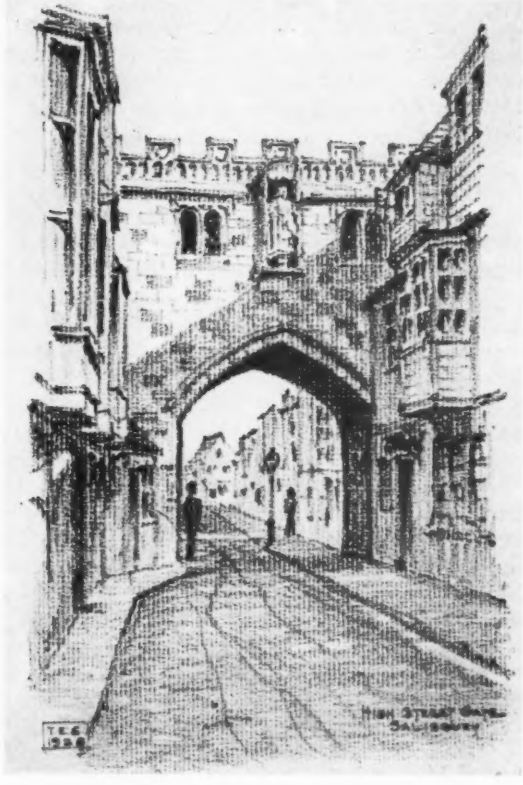
By William C. Ullrich



BAPTIST CHURCH, MILLERTON, N. Y.
By Taber Hofmann

ROOFS, CATHEDRAL, PUEBLA, MEXICO
By Jane Pelton

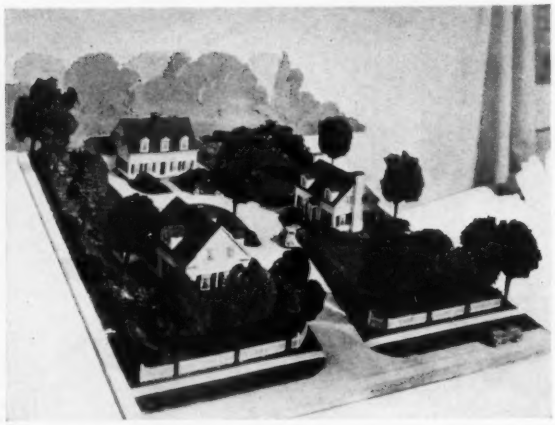
IMAGINATIVE SKETCH . . . Wilbur H. Adams
Made with grease crayon. Intended as one of a series to submit to motion picture producers with the suggestion that an architect would make a good set designer



HIGH STREET GATE . . . Trent Elwood Sanford
Is part of the old wall bounding the Cathedral Close at Salisbury. Built in the early part of the fourteenth century. Drawn on rough gray paper with litho crayon

XUM

What Architects



IVORY SOAP was used for this model of a Cape Cod group, the buildings being designed to show what could be done on a site 140x250. Exhibited in the Chamber of Commerce window, Tiffin, Ohio. Troxel and Pahl, architects

Douglass Cites Marriages to Forecast Home Building Boom

MARRIAGES are used to make a forecast of home building in figures tabulated by A. S. Douglass, chairman of the research committee of the Detroit Building Congress. Comparison of the number of marriages and building permits for houses issued each year in Detroit showed that in 1928 the ratio was 1.6; in 1929, 1.9; in 1930, 3.6; and in 1931, 6.1. According to Mr. Douglass, "The purpose of this information is to set forth that the potentialities for home construction are proceeding at a rate vastly greater than the rate of home production."

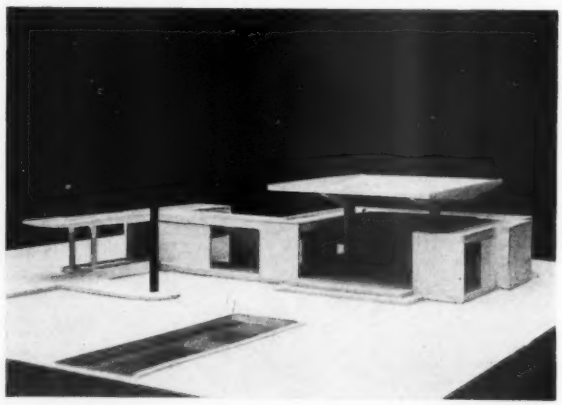
Home Loan Banking Bill Starts New Era

THE most important era in the 100 year history of the building and loan industry began the day that President Hoover signed the Home Loan Banking Bill, according to William E. Best, president of the United States League of Building and Loan Associations. He predicted a revival of the home building industry through operations of the Home Loan Banking System in the expansion of credit.

Bookless School Started by Frank Lloyd Wright

FRANK LLOYD WRIGHT'S new school at Spring Green, Wis., will be bookless. Students will first make a broad study of architecture. The materials that go into a building will be studied at first hand, the students quarrying stone and hewing timber. They will learn about soil by tilling and studying it. At their drawing boards, they will consequently be imbued with the idea that buildings should fit the landscape and be better able to design them with that idea in mind. Sculpture, painting and music will also be studied. In the evening entertainment will be combined with the further quest for a well-rounded life. The faculty will include Mr. Wright, three technical advisors trained in industry, three resident associates—a sculptor, a painter and a musician—and a group of seven honor or senior apprentices. The school, which opens this month, is known as "Taliesin Fellowship."

INSTALLATION of the most complete and elaborate system of electric chimes in the world has been made in the Crucifixion Tower of the Shrine of the Little Flower, near Detroit, Mich. The bell-like tones of the new carillon are all produced electrically, the lowest note on the keyboard being equal to the tone of a forty-ton bell, according to engineers of the RCA Victor Company who designed and installed the system. The instrument also includes a special reproducing apparatus through which organ music may be played, utilizing the same sound projection system as the electric carillon. The entire instrument is controlled from a forty-nine note piano-like keyboard.



BONNEY

MODEL for a country house, being a forecast of the future by Gabriel Guevrekian, French architect. Terraces are covered with elevated roofs extending beyond the walls. Large areas of wall are entirely of glass.

"CUTTING and fitting materials on the job is always a wasteful and costly procedure; for some unexplainable reason the building industry has neglected this obvious defect in method and, as a consequence, home construction has not kept pace with other classes of construction." So states F. Leo Smith, technical secretary of the American Institute of Architects. "The architects' cooperation in these new developments is essential or the result is most certain to be a monotonous repetition of characterless structures, devoid of interest and lacking in those qualities which are necessary to encourage home ownership."

XUM

Are Talking About

Management Problems Akin to Architect's Problems

Largest System of Electric Chimes

Flat Roofs Not Suitable for Houses

IMPROPRIETY of flat roofed houses is cited by Wm. Roger Greeley in his new book, "An Architect Muses." Mr. Greeley states, when discussing "propriety," that: "Through use, or evolution, certain architectural forms or types have become associated with certain kinds of buildings. A house, especially in colder climates, signifies shelter, and this idea of shelter has come to be expressed by a sloping roof, with its eaves overhanging like the protecting wings of a brooding hen. If we construct a cottage with a flat roof, we offend this principle of propriety. This is true even if a flat roof happens to be a more sincere form to use. In this case the consideration of propriety has been, at least in our climate, stronger than that of sincerity. We are so accustomed to associate the pitched roof with the idea of proper shelter for a house that we demand such a roof, regardless of its extravagance and inutility."

THE position of manager, as typified in the average business executive, is comparatively the same as that of an architect, according to F. A. Merrick, president of Westinghouse Electric and Manufacturing Company, who visions an organization much as an architect visions a building. The manager correlates all functions so that the work will proceed in harmony, just as an architect correlates the various crafts.

MORTGAGE adjustment and refinancing to protect building ownership is a new advisory service offered by a number of real estate boards.

ADAMS STUDIOS

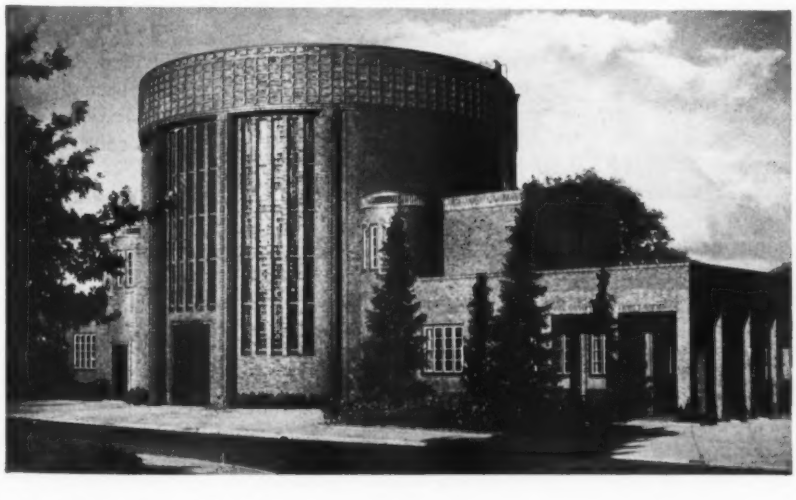
ARCHITECTURAL BOOKS are kept in this specially designed bookcase designed by and in the office of Vahan Hagopian, architect

SWITZERLAND'S first skyscraper is to be welded. It will be twenty stories high and will be built at Lausanne.

A NATIONAL planning board manned by engineers, physical scientists, statisticians, economists, accountants and lawyers is advocated by Stuart Chase in his book, "A New Deal." Aside from the planning board, Mr. Chase predicts that the next great economic step would be the rehousing of America. He proposes that the board should be set up under the auspices of the Federal Government and supplemented by regional boards in major economic areas.

THE National Conference on Construction will be held in Washington, D. C., October 13 and 14. Economic construction will be the central topic for discussion. Elimination of waste, better information and planning, and improved organization as a means of economic construction will be reported on. The chairman of the committee on arrangements is Colonel Willard Chevalier, publishing director of the Engineering News-Record, New York. Among the committee is E. J. Russell, president of the American Institute of Architects.

(*Continued on page* 98)



MORTUARY CHAPEL in a cemetery at Ohlsdorf, a suburb of Hamburg, Germany. In detail, the three brick pilasters and frieze about the top of the circular portion of the building are especially interesting. Designed by Prof. Dr-Ing Fritz Schumacher, city architect of Hamburg

XUM

Saving Time in the Drafting Room

BY ALBERT C. WOODROOF
Architect, Greensboro, North Carolina

The production cost of drawings must be lowered if the average architect is to have a comfortable profit under today's conditions. Mr. Woodroof explains how he cuts drafting costs by the standardization of details which may be frequently used without sacrificing the results desired

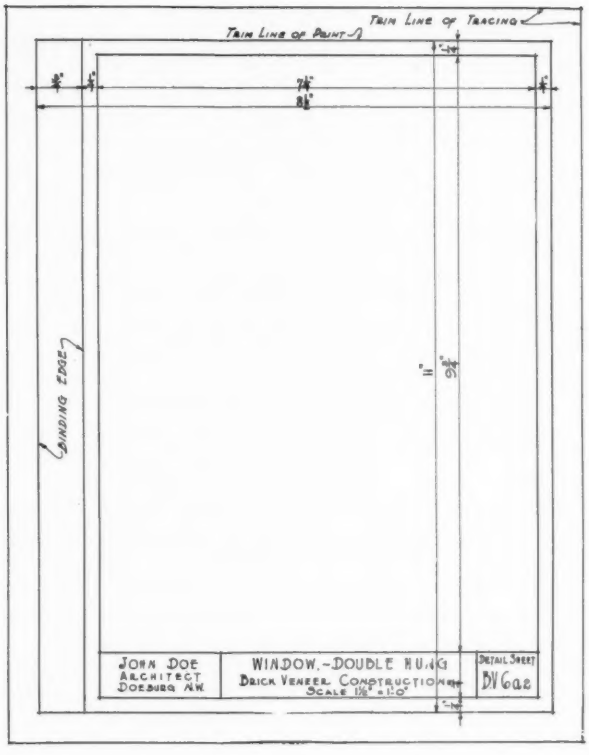


FIG. 1
Standardized detail sheet on letter sized tracing paper

EVERY architect has, on more than one occasion, copied some detail "cold" from another set of his plans! Naturally! He does it because it exactly fits the new case.

Every architect has wished that the detail didn't have to be copied. He would like to be able to blueprint it and save the drafting cost involved. Why not, then, make the details of every job in such a way that they *can* be reused without retracing and save the cost of drafting?

Here are a few simple rules based upon experience:

1. Standardize a detail sheet on tough tracing paper, letter size, with border lines and title. (See Fig. 1.)
2. Use a separate sheet for each feature to be detailed.
3. Use as large a scale as possible to show parts clearly and fill the sheet.
4. Omit major dimensions, which should be shown on the plans or elevations. (See Fig. 2.)
5. Omit minor notes which do not necessarily apply to each building—specifications usually cover materials and quality.
6. Show details in arrangement of component parts, indicating various parts with standard "hatching," symbols, etc.
7. Give each sheet a *permanent* number, using such system as will allow an unlimited number of sheets in each grouping without upsetting the numerical order of the entire set.
8. When blueprinting the plans, have an equal number of copies of the detail sheets made and bind them in the back of the specification cover or bind separately in a "detail cover" and issue same as part of the contract documents.
9. File tracings or office set of prints in an indexed vertical file, or in an indexed loose leaf notebook.
10. When another job is started, select the suitable detail from the file and use a blueprint copy in the drafting room for reference to save wear on the tracing. Make new sheets for any variations that must occur from time to time, thereby always adding to the completeness of your set of details. Make a notation on sheet No. 1 of the plans of the detail sheet numbers which form a part of the contract. This is your permanent record.

SAVING in drafting costs will not be evident for some time, but after several buildings have been detailed in this manner, it will be seen how often the detail of a window, stair, door frame, type of floor construction, etc. occurs and may be used again.

Since these detail sheets will be developed in each office in an entirely different order, i.e., as they are required by specific buildings, a system of numbering will be required which allows a constant filling in without upsetting the numerical order.

It is readily seen that the contractor is not involved in the numbering system at all, since he receives only those prints which apply to his job and he has them neatly bound for ready reference. It is suggested that notes be put on plans and elevations referring the contractor to specific details by number.

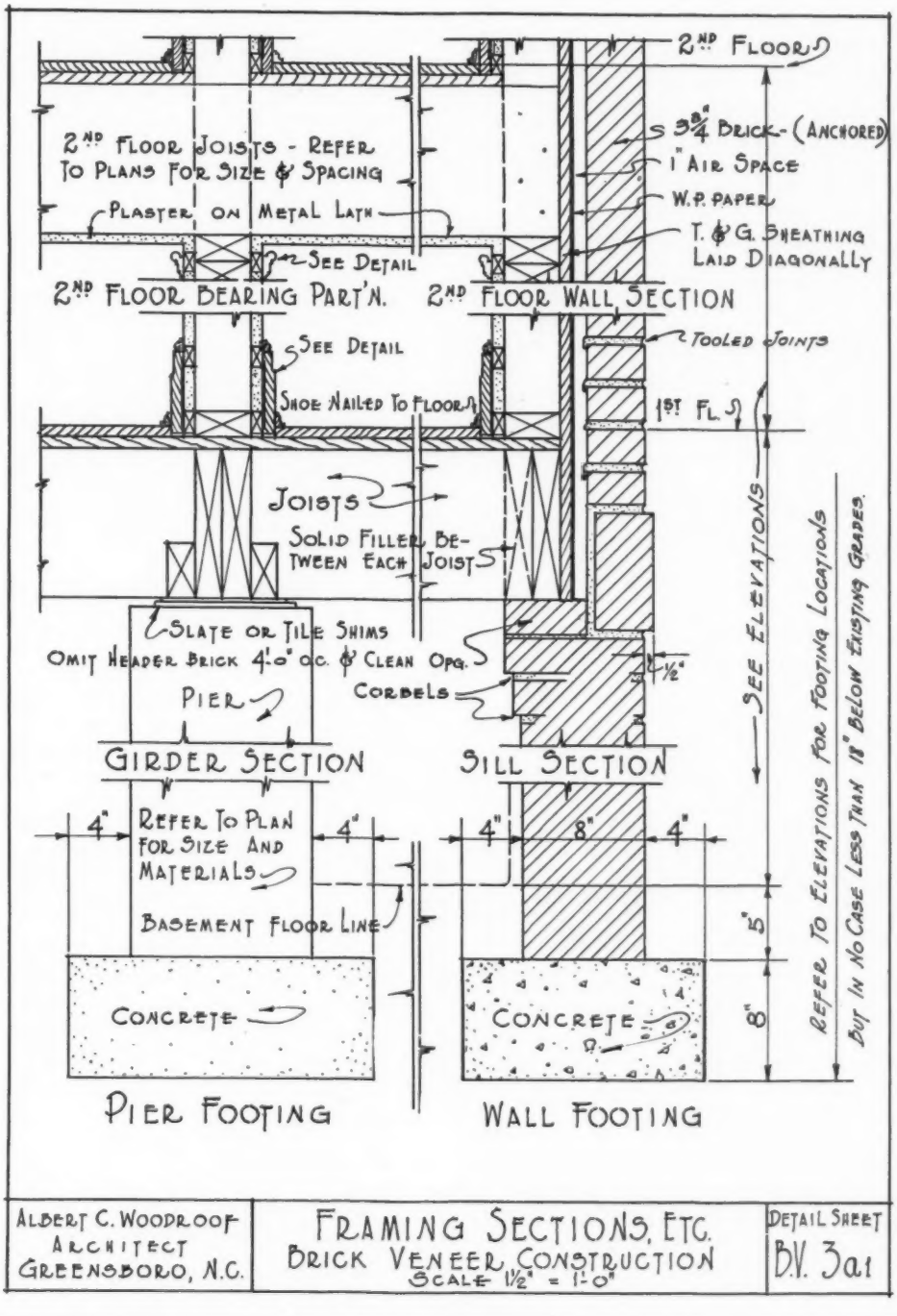


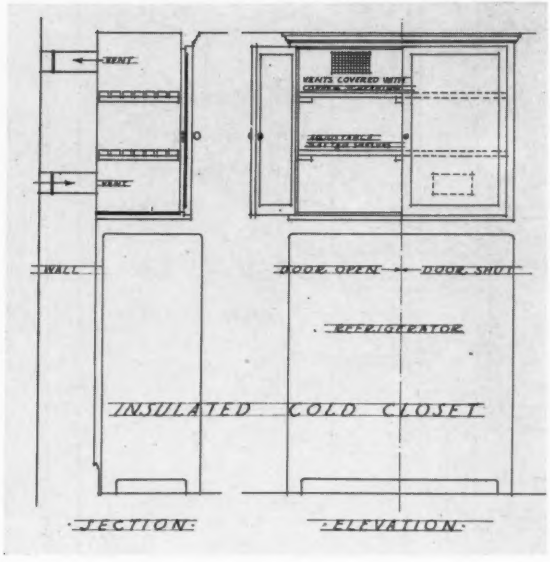
FIG. 2

TYPICAL STANDARDIZED DETAIL SHEET

Each detail is drawn on tracing paper. All major dimensions are omitted, these being shown on either the plans or elevations. Every sheet is given a permanent number. Original size of sheet, measuring from outside ruled lines, 9½" x 12"

XUM

. . . Things You Didn't

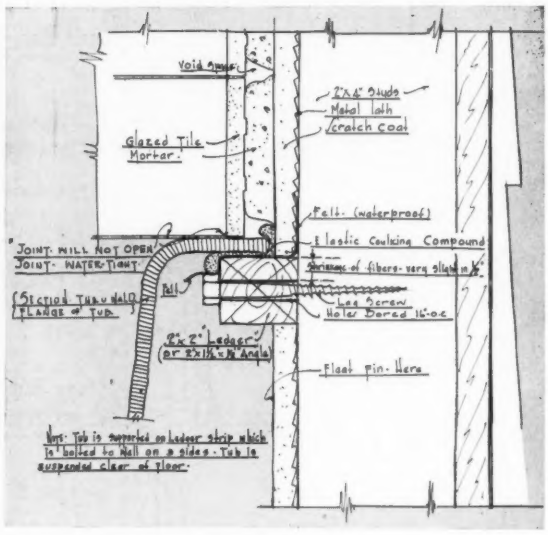


• COLD CLOSET FOR THE SMALL KITCHEN

By William Heyl Thompson, A. I. A.
Philadelphia, Pennsylvania

TO provide a cold closet, and still keep within the small kitchen, a cupboard which can be placed over the refrigerator is shown in the accompanying sketch. If in planning the kitchen the refrigerator cannot be placed against an exterior wall, this same idea can be applied to a cupboard at one end of the sink, or even to a full length closet in any corner of the kitchen on an exterior wall.

It would be well to insulate the closet with an insulating board. The shelves can be made of slats, fixed or adjustable, to allow full circulation of air from top and bottom vents, covered with copper screening.



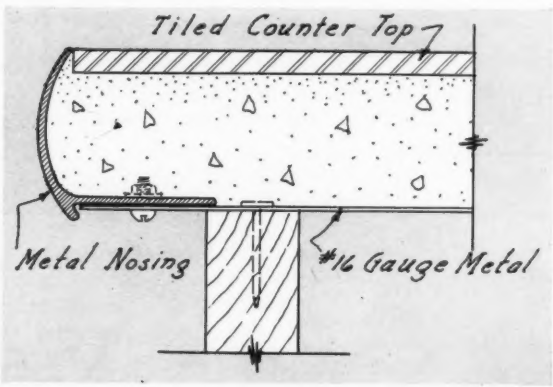
• TO PREVENT LEAKS AROUND BATHTUBS

By M. M. Guerry
West Orange, New Jersey

A DETAIL devised to overcome leaks and settlement around the wall adjoining recessed type bathtubs is shown in the accompanying illustration.

This condition prevails due to the common practice of placing the tub on the floor for support. Settlement is due to shrinkage and deflection of floor beams, which amount to an average of ½" on 10" beams.

A ledger strip is fastened to the walls before the lath and plaster is applied, and then a 3-ply strip of felt waterproofing is nailed to studs and ledger strip. Before tub is set plumber applies a bed of whiting or elastic caulking compound and then tub is set over same. The tub is thus supported by the walls.



• STAIR TREAD NOSING FOR COUNTER TILE

By Harry F. Weeks, architect
Detroit, Michigan

WHEN using tile for kitchen and pantry counter-tops, metal stair tread nosings reversed make simple but striking terminations. The top of the case should be covered with 16 gauge black or galvanized iron. The nosing is secured to the metal and an ideal pocket is formed to receive the cement grout. A two inch nosing will be found most advantageous as it will give ample depth for pitch of drainboard and bullnose at sink.

XUM

Learn in School . . .

• CARBON COPY OF CHECK BECOMES OFFICE RECORD

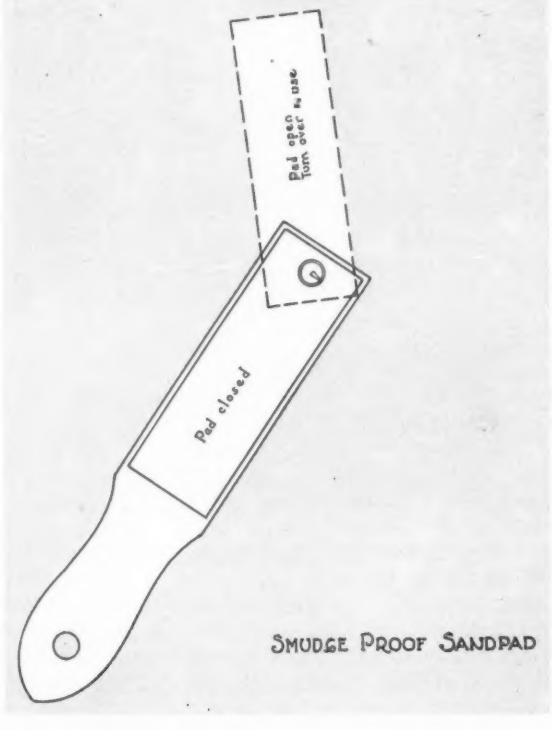
By R. G. deLappe, architect
Oakland, California

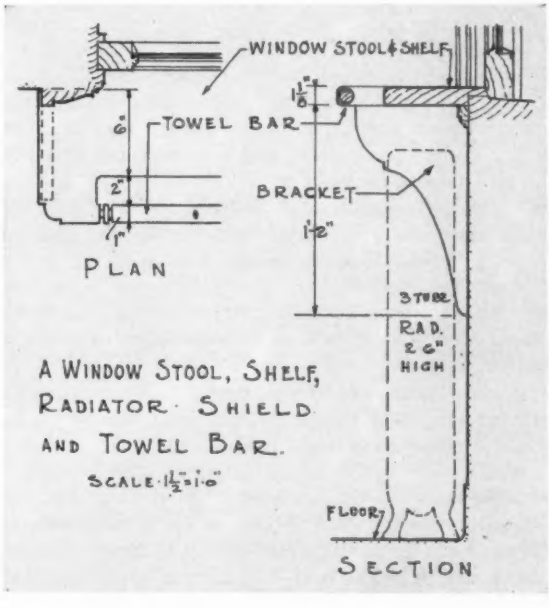
WE make a carbon of each check, thus condensing essential records into one document. This check and carbon serves as a certificate, evidence of job inspection, payment, record, receipt and release. It eliminates handling of currency and much work in both owner and office accounting. It can be made payable jointly to the contracting party and his vendor or labor, which insures that the funds paid are paid for and to those persons with whom the owner has either a direct or a pending obligation.

• SMUDGE-PROOF SANDPAPER PAD

By Gene E. Fitchner, architect
Tallahassee, Florida

TEAR off all the sandpapers of the ordinary sandpaper pad. Thumbtack one of the sheets, sanded side down, to the block so that the thumbtack acts as a pivot. The only thing that can get dirty is the side of the block covered by the sandpaper.





• HANDY WINDOW SHELF

By Harold H. Ehlert
Detroit, Michigan

TO eliminate the placing of things on radiators or radiator covers in certain rooms, a shelf may be used as shown in the accompanying sketch. This is a combination of window stool, shelf, radiator shield and towel bar.

XUM

Small House Featured

Nearly 200,000 people passed through this six-room house, exhibited at the Boston Home Show and designed by Royal Barry Wills, architect; several commissions were secured

THAT there is considerable public interest in six-room houses completely equipped for $4,000 was shown at the recent Boston Home Show. Not only did those attending the show evince considerable enthusiasm, but three duplicates of the house exhibited are now under construction and it is expected that four more will shortly be started.

According to the architect, Royal Barry Wills, "These houses were designed to be built for $4,000 and our fee was relatively small, although I do feel that due to the similarity of design, it would be possible to make money at the present time on these houses, although it is certainly desirable to have a large number of them go ahead to make any profit."

The class of people that seemed to be particularly interested were retired doctors, managers of companies, authors, artists, decorators, professional and semi-professional people. About two hundred were definitely interested and half of these were good prospects.

Added interest to the exhibit was lent by a display of sketches of houses costing from $3,800 to $6,200. Models of the house exhibited were sold for a small sum and proved of interest to both children and adults.

Many people were interested in much larger houses than the small one exhibited. This interest was stimulated by Mr. Wills, who with easel and sketch pad made designs of larger houses as the prospect stated his problem.

The only apparent drawback to interesting people to the point of building was the financial situation and the consequent inability of Mr. Wills to present a definite financial arrangement which would be applicable to the majority of those desiring to build. He has talked to many of the prospects since the show and found that all the good ones were marking time until they had some assurance that business conditions will improve and financing become available.

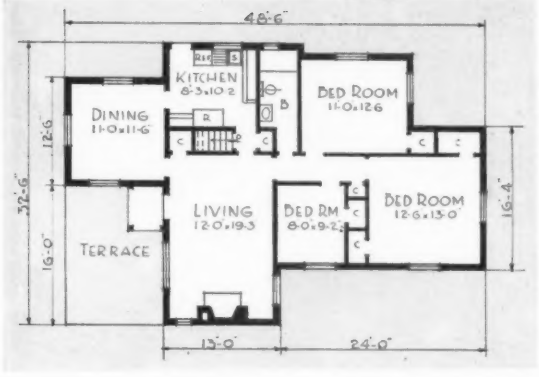
When people evidenced interest in a different plan or design, Mr. Wills was there to sketch it on the spot. This feature attracted much attention

The experience of Mr. Wills indicates the great public interest in moderate cost housing and the willingness of the public to consult an architect once they understand that he is a practical person capable of giving trustworthy advice. It is difficult for architects to make proper contact with large numbers of people excepting through expositions such as that in Boston. Though this was an individual effort, yet the benefit to the profession at large could not help but be considerable, for here many people had their first contact with an architect.

In Boston Home Show

The house, built of cinder concrete blocks, was erected in four days. The cost of duplicating this house was quoted at $4,000, complete with equipment

INTERIOR WALLS were finished with a coat of 3/8-inch plaster, applied direct to the cinder blocks, and a coat of paint sprayed on. Plaster board was used for the ceiling with 3" x 4" timbers exposed in the living room and dining room



Architectural societies could well afford to take an active interest in every local exposition attracting large numbers of people and to develop an idea which would really educate those attending as to the value of architectural service. Most people who attend the average architectural exposition glean little from it except that an architect certainly can draw pretty pictures. They leave having learned nothing of the practical side of the profession's work such as the money saved by the proper letting of contracts, by supervision that insures the owner getting what he is paying for, by constant vigilance to safeguard the client at every turn and to keep him free from legal entanglements.

Those are the things that the public will seldom even hear of except from an architect. And if the architect does not trouble to tell him, who will?

XUM

The High Cost of Birdseed

BY CHARLES S. KYSON

"WELL, I just fired the world's champion cross-hatcher and birdseed artist," drawled Jackson Lee, his dark eyes twinkling with humor.

"Birdseed artist—birdseed artist? Whatizit? Whatizit? Does it croak, moan or squawk? And why falleth the axe?" banteringly queried George Bradley.

The query drew the attention of the Architectural Iconoclasts, gathered for their weekly luncheon at the Pepper Pot Coffee Shop.

"Well, George, hampered as you are by a fancy college education, but being still eager to learn, I will, for your sake, say that a birdseed artist, my boy, is an architectural draftsman who seems to look upon working drawings very much as my good ole' Aunt Mary did a crazy quilt—as something to be decorated up—made to look busy and artistic."

"Check and double check. I recognize the species now. I've got one or two of those cute little animals in my private architectural zoo all right," exclaimed George Bradley with a mocking grin.

"I reckon so, George, and I'll bet yours is an ex-Beaux Arts Society or college kid like mine was—accent on the was!"

"All right, Rango-pango! Pick up the crystal ball. You win the conical astrologer's hat. He's one of them things all right."

"Well," continued Jackson Lee, "this morning I squinted into the drafting room and my domesticated birdseed artist was stretched over the drawing board in a trancelike state. There was a placid sheep-like expression on his face. He was in his glory—peacefully, methodically, cross-hatching. And, boy! what a cross-hatcher that human robot was! With a calm, satisfied and beatific deliberation, he drew his fine tender lines in careful mechanical precision. His brains were in a complete state of rest—he just drew—birdseeding the hours away! Unfortunately for said draftsman," Jackson Lee smiled reminiscently, "I had acquired a healthy, masculine grouch—you know how it is—something went wrong on the Jones job and I felt mean enough to bite my grandmother. Well, after watching that chap for a few minutes—that contented, dreamy smile—the deadly deliberation—those fool, meaningless lines—y'know—it was just the last straw that bloated and blew up the patient camel. So, dog-gone it, I up and fired him!"

"Brother in suffering, I salute thee!" James Cameron dramatically extended his hand across the table. "Don't I know the type! Not so long since I had a stormy session in my own drafting room. I rounded up the crew and the pearls of wisdom I tossed around would have made a swell necklace for the Delphic oracle."

"You told 'em, did you Jimmy?" razzed George Bradley.

"I certainly did—and for the good of their economic souls, too. Many cub draftsmen, yes, and some more experienced ones too, who should know better, don't seem to understand what a set of working drawings and specifications really are. To my bunch, I said, "Boys, get this: plans and specifications are simply instructions to a lot of mechanics telling them how a certain building is to be constructed. Make these instructions clear and understandable. Yes, and as simple to read as you can. Do this, and the building operation will be carried through economically, easily and expeditiously. Just keep in mind when you are making working drawings, that you are, in reality, bossing that job—telling the workmen how you want it done. And, for the love of the exalted T square, keep your instructions simple. Don't try to get all of the information on one drawing. If it tends to get birdseedy, it becomes hard to read—better make two drawings instead. Limit the birdseed to the intellectual digestion of the horny-handed canary who slings the bricks and reads the blue prints."

"JIMMY CAMERON is by way of becoming the patron saint of the drafting room," laughed Julian Munroe admiringly. "Jimmy, if you can bring that home to the draftsmen of this country, you will be revered and called blessed. It reminds me—years ago my old boss gave me this bit of advice, which I have never forgotten. He said 'Don't draw one single line, or put a figure or a note on a working drawing that you don't understand or believe to be correct. Be sure it is necessary and that it has some definite meaning. IF YOU DON'T KNOW, FIND OUT! If you stick to that rule, you'll soon commence to really know something. You will be

Being a Discussion of That Ever-Present Problem . . .

Wasting Time in the Drafting Room

a man that the boss will commence to depend upon—he will have confidence in you—you will become invaluable to him. Rigidly school yourself to simplify things.' The insane asylums are full of people who complicate simple things—that's one reason why you find them inside!"

Julian Munroe knocked the ashes from his cigar deliberately. "Here is a method that has been of great help to me in making working drawings clear, and it is one not used to the extent it should be. In making scale drawings, it is an excellent idea to develop and carry forward the elevation, the plan and the section together. Suppose for example, it is necessary to detail a complicated entrance doorway. Directly below the elevation leave space to draw the plan, and at the right side of the elevation a space for the section. Now, assume you are working on the elevation and you strike a difficulty which will have to be solved in plan—why, all you have to do is to drop down to the projected plan below and work it out there. This may lead to a question of how it is going to work in section. You then move up and over to the section and there study it out.

"Believe me, fellows," Julian Munroe spoke earnestly, "when you insist on your draftsmen following that method, you are going to have fewer expensive mistakes in your drawings. You check the drawings as they are made, and your drawings 'work out' on the job. If you become accustomed to following this method, you will never go back to the old and fallacious one of finishing up the elevation, then drawing the plan or the section, perhaps on some other sheet, only to find out that some fundamental mistake has been made which necessitates redrawing the whole thing. Too many chances to make mistakes that way, and it's too expensive."

"You bet it's a good idea! I've tried it—works too!" emphatically declared George Bradley. "Sounds so darn simple and reasonable, you'd think anyone would see it, but I've personally had to fight with some very experienced draftsmen to get them to do it."

"There's one thing in favor of that method, I should say," Charles Gordon leaned forward interestedly, "I imagine it tells right off whether one is drawing a lot of meaningless lines—you could check quickly from plan to elevation, etc. and see if the drawing was being birdseeded or not."

"You sure can, Charles, and no fooling," George Bradley spoke with his customary enthusiasm. "It cuts out lost motion and cheats the canaries."

Here, F. Puddingstone Huntley entered into the discussion. "Of course, you realize, fellows, there are lots of architects who take much professional pride in the working drawings which come out of their offices. Personally, I rather sympathize with the idea. I recall a very fine firm for which I worked in New York; they turned out really lovely drawings—it was a pleasure to work there. Cost was never mentioned—it was just a question of exhaustively studying a thing and getting the best results possible. I—er—rather imagine it was expensive though."

"You darn well know it was!" Jackson Lee exploded. "I know the outfit you worked for, F. P. Architecture was an elegant and dignified avocation with them—they didn't have to make any money out of their practice—they inherited the mint, and architecture was just a swell plaything. But most of us can't afford the birdseed they demanded and liked. Why, F. P., I doubt if you have any idea as to what that sort of thing costs. I know of a large mausoleum which cost about $1,500,000 and the drawings alone, without supervision, actually COST $75,000.00, or 5.0%. There are many architects, who, if they had gotten that job on 6.0% basis for plans and supervision, would have had visions of taking a trip to Europe on the fancied profits."

"I KNOW another case of a large complicated office building on which the architects paid out $100,000 for the plans alone. This was between 4.0% and 5.0% of the cost of the building. Tell that to the average architect or draftsman and they would hoot at you and say 'Tell another one, Scheherazade, old girl, how we love to hear you lie!'"

"In the light of my experience those costs do not surprise me at all," Julian Munroe spoke with the quiet certainty of actual knowledge and experience. "The high cost of the——er, birdseed, as you boys choose to call it, is something we architects can well afford to think about. It might give draftsmen a different slant on some of their lost motion and non-productive activities if they realized that for every dollar their employer pays them, he has to collect from $3.00 to $3.50, or three to three and one-half times the cost of the drafting to meet their salary, pay the overhead over slack and busy times and permit himself to take in even a small profit."

Julian Munroe started to jot down some figures on the menu. "For example," he continued, "look at this. Assume you pay a draftsman $65.00 per week. And he is to draw, title and border a drawing. Say it takes him fifteen minutes; his pay for that work is forty cents. Multiply this by 3.5 and we find that title has cost the employer $1.40. Now, of course, we admit that the titling and bordering of a drawing are necessary, but it would save considerable money in a year to have it stamped or printed. I use this example just to show what a little unnecessary elaboration or birdseed can easily cost and how a draftsman can save his employer a very considerable sum of money during the year by using a little common sense and care."

"Stating it that way, Julian, it does rather point to the necessity of putting the architectural canary on a diet," laughted Jackson Lee, looking at his watch. "Well," he continued, "the painful necessity of calling time faces me—tempus and its figity passage, you know. The old Pepper Pot has bubbled today to some purpose, we hope. And now, boys, until the next time."

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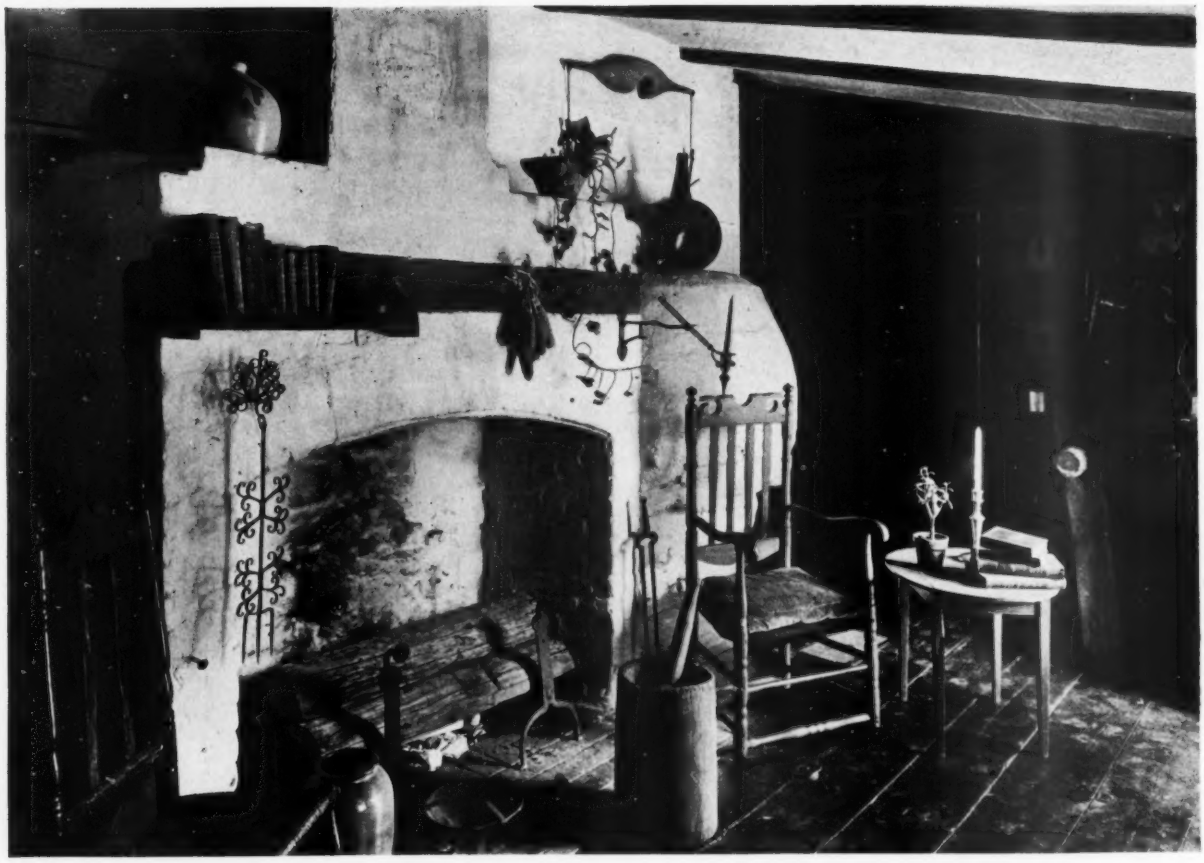
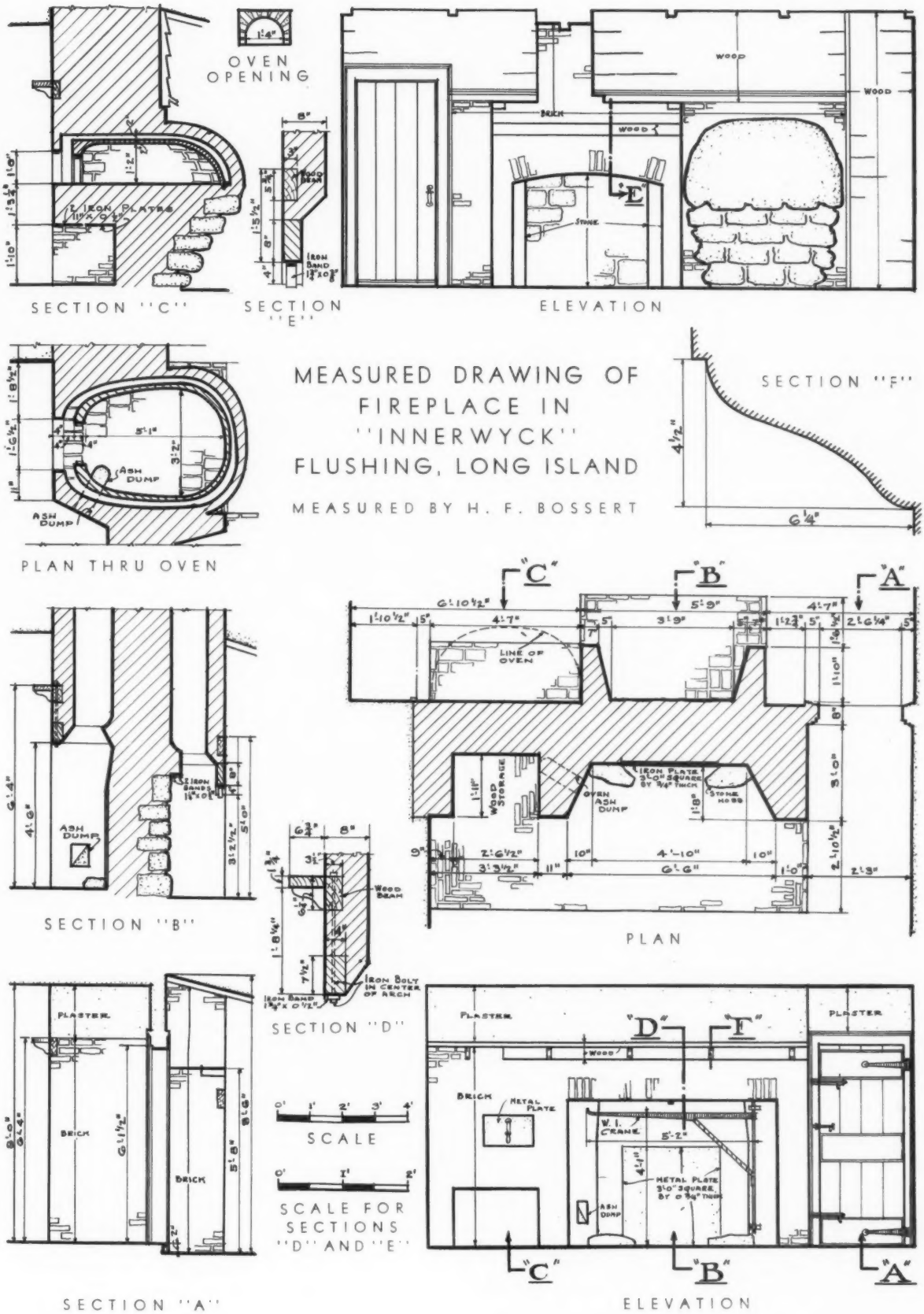


FIREPLACE AND OVEN IN "INNERWYCK," FLUSHING, LONG ISLAND

MEASURED DRAWINGS BY H. F. BOSSERT

Photographs by Samuel Gottscho



"INNERWYCK" ALSO KNOWN AS THE MITCHELL HOMESTEAD, BUILT IN 1780, NOW OWNED BY GARDNER B. PERRY

XUM

. . As It Looks

Ancient America

CALAK-MUL, Yucatan, is an old Empire city but recently discovered. It is a city comparable in size to Chichen-Itza or Uxmal. C. Longworth Lundell is the first white man known to have visited it. His visit was followed by that of Dr. Sylvanus G. Morley. It is curious that a city of such importance should have remained so long totally unknown. It substantiates the opinion of J. Herndon Thomson, whose article on archaeology in America appears on page 18 of this issue, that Middle America offers a fertile field for research that is virtually untouched. His contention is further justified by the recent discoveries made in Peru by the Shippee-Johnson expedition. From the air these explorers discovered the "Great Wall of Peru" and the "Lost Valley of the Colca"—a valley of tiny villages, huge churches, palaces, fortifications and terraces built for agricultural purposes.

Weapon Against Billboards

PROGRESS continues to be made in the matter of ridding our highways of unsightly billboards. Through a decision of the Court of Appeals, New York State has been sustained in its right to screen out billboards by means of planting so long as the planting is on state property. Where it is impossible to otherwise correct the situation the state now has a rather effective weapon. The billboard question has been given national attention with good results. This should give encouragement to campaigns for correcting other evils that annoy the public and by no means add to the beauty of the country.

Photography Is Useful!

DUE to encroachment of industry on a residential neighborhood in England an owner decided to have his house taken down and rebuilt in a new location. The builders had more than a hundred photographs taken to enable them to rebuild the house in every detail exactly as it originally stood. It must have been a large house for the work of removal is said to have taken more than three years to accomplish.

Prevent Fire

OCTOBER 9 to 15 is designated by proclamation of the President of the United States as "Fire Prevention Week." The idea of "Weeks" has been greatly overworked. This one however has merit that goes beyond the commercializing of sentiment and the emotions. In 1931 some 10,000 people in the United States were burned to death and the estimated fire loss was nearly $500,000,000. Add to this the cost to communities of maintaining fire fighting equipment and personnel and our national loss through fire reaches staggering proportions. It is said 80 per cent of all fires are easily preventable. Through proper planning, use of fire resisting construction, and protection of hazardous areas in buildings, architects can not only assist in reducing the annual fire loss but also help owners reduce building maintenance costs and fire insurance premiums. Economy often overshadows the obligation of those in control of a project to protect the lives of those who use our schools, hospitals, and other public and semi-public buildings. They need to be reminded of the importance of adequate fire protection. By reminding clients of this, architects are but maintaining the trust imposed upon them by those whom they serve.

An Increasing Demand

ONE thousand fifty-seven families scattered throughout the country were asked, "What do you want to buy next?" Twenty-eight per cent want an electric refrigerator; nearly fifteen per cent, a rug; twelve per cent, a radio; ten per cent, a washing machine; and another ten per cent desired a vacuum cleaner. The significant fact about the results of this survey is the importance that electricity plays in the lives of our people today. Every year sees an increased use of electric current with the result that houses—and other buildings too, for that matter—must be adequately wired to meet user demands. This means more circuits, more convenient outlets, and larger wires to safely and satisfactorily take care of the ever increasing load.

Modernism in the Solid

LOOKING back on the last convention of the American Institute of Architects, Robert D. Kohn says, in *The Octagon*, that he would have liked to hear a discussion on the relation of the logical bases of modern architecture and this architecture in the solid. He says, "The architecture, in the solid, which is produced and exhibited as evidence of this logic—as expounded by the proponents of modernism—seems to me to bear no relation at all to any of these generally admirable words." He suggests that it might be a good idea to hold an exhibition of "modernism" and make the designers defend their work both as to logic and art. This might prove to be an extremely interesting idea. If any A. I. A. Chapter, society or club does anything about it, the editors of AMERICAN ARCHITECT would like to know about it.

What's in a Name?

THE "Washington State Architect" recently printed the following incident as having happened in Seattle. "When is Portland cement not Portland, is the question which arose when a city councilman in Seattle asked, in reference to specifications for 'Portland cement' 'Doesn't that give the preference to cement made in Portland, Oregon?'"

XUM

to the Editors . .

Legal Problems

WHERE architects have encountered legal problems that they would like to see discussed in AMERICAN ARCHITECT, the editors will appreciate being so advised. If such requests appear to be of sufficient interest to a large number of practitioners, articles by authorities on building law will be obtained and published.

Business Failures

FOR nearly twenty-five years the W. S. Tyler Company has distributed a little publication called "The Latch String." It is an unusually well and thoughtfully prepared booklet. It is often full of inspiration and sound advice. Architects can obtain copies upon request. In a recent issue it was stated, "A judge in a bankruptcy court says that incompetence is the chief cause of failure in business . . . . many men . . . . are ignorant of the basic principles of business procedure. Thousands who come to the court of bankruptcy have never kept a set of books. They have no knowledge of what they owe, what is owing them, or of the value of their inventory. They have no fixed salary, but take from the business what they need for living expenses. To them, bankruptcy is as unexpected and inexplicable as an earthquake." It is a good thing to know where we stand in business. Without a good bookkeeping system we cannot know with certainty. Architects who do not have such a system would do well to investigate the subject and start a simple set of books that meet their requirements.

Too Many P. O. Additions

ON August 24, 1932, according to a newspaper report, an architect from the U. S. Treasury Department visited the Chambersburg, Pa. post office to make a survey for a 28x71 feet addition to the existing building. Last year $28,000 was spent on a twenty-eight foot extension to this building. Neither the postmaster nor the architect knew what the second proposed addition was all about. But apparently once having secured an addition to a post office, others come of their own accord. Was the first addition too small or the proposed second addition a costly error? In either case, taxpayers may well ask, why?

Small Offices Have Advantage

IN general, small well-managed businesses have weathered the economic storm of the past two years better than many large enterprises. This is as true of the small architectural office as it is of other lines of endeavor. Many architects operating small offices are today thankful for their low overhead. Many large offices are now wondering how much longer they will have to pay rent on unutilized space. The small office has much to commend it and much to be thankful for right now. The history of business is filled with tales of growing businesses that expanded beyond the bounds of safety. It has been truly said, "Many good little businesses have been ruined by big business ideas" and "Now is the time for the well-managed small business to establish itself."

Sounds Reasonable

CHARLES C. DOBIE, in the New York American, recently said, "Precedents belong to the past. Timorous folk like support, old or new, moral or unmoral. Precedents are old fashioned. Precedents are the refuge of knaves. Precedents are the monkey-wrenches tossed in the machinery of progress. Holy Writ is not the only thing that the devil quotes for his purpose. When he really is in a tight place he quotes precedents."

Few architects will perhaps agree with that writer's views on precedent. There is, however, much truth in what he says. Perhaps knowingly or otherwise, this largely explains the motivating urge of many to break with traditionalism.

Wasted Space Made Useful

THE Pittsburgh Retail Institute recently held a contest for a solution of "The Use of Idle Space in Stores." The first prize suggestion was the use of flat roof space of department stores for the erection of a hothouse to be operated by the store or a florist. The originator of the idea demonstrated that such a venture can be made profitable. Perhap this contains a business getting idea for architects. It should be possible to find buildings having unutilized waste space and to suggest how the space can be made profitable. It would probably involve some building work. Perhaps several department stores could be interested in the idea of erecting hothouses for the growing of flowers and shrubs to be sold.

All Wrong But They Like It

THE painting, "Washington Crossing the Delaware," is thoroughly familiar to every American. For years it has hung in the Metropolitan Museum of Art, New York. Its recent removal from the walls of that institution caused such a public furor and storm of protest that the painting has been taken out of storage and hung in the American wing. The painting is stated to be all wrong in detail and not very good as a piece of art. In spite of this, it has won a place in the hearts of all Americans. The publication of reproductions of the painting in innumerable school books has been offered as an explanation of the public's attitude. This is a reasonable answer and indicates the importance of making good architecture a part of the education of every American. Architecture as thoroughly "sold" to youthful Americans as "Washington Crossing the Delaware" would work wonders for the architecture of this country.

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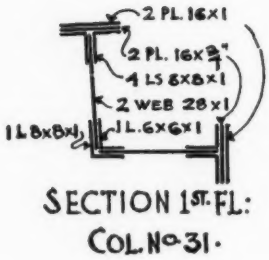


FIG. 1A (left). Design used to avoid setting corner column off center with other wall columns

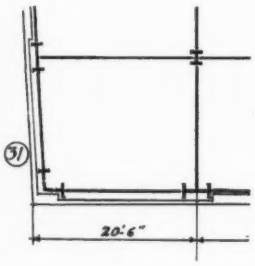
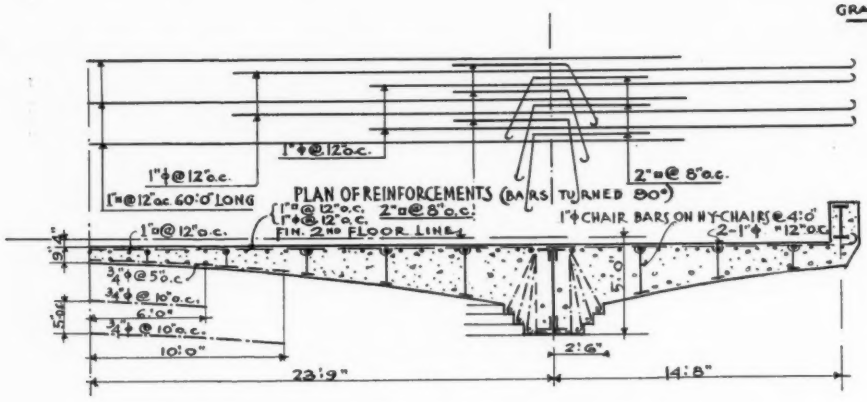
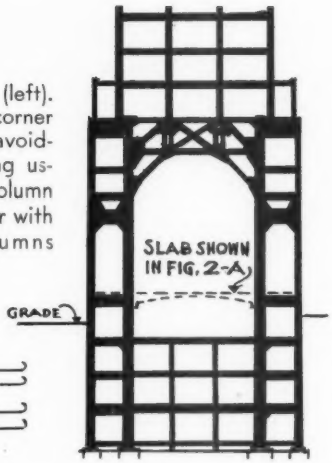


FIG. 1B (left). Special corner column avoided setting usual H column off center with wall columns





FIGS. 2A AND 2B. Long span concrete slab, which provided maximum ceiling height for a banking room below street level. Room is 44′ wide and 150′ long

Unusual Solutions of Unusual Structural Problems

BY W. S. WOLFE

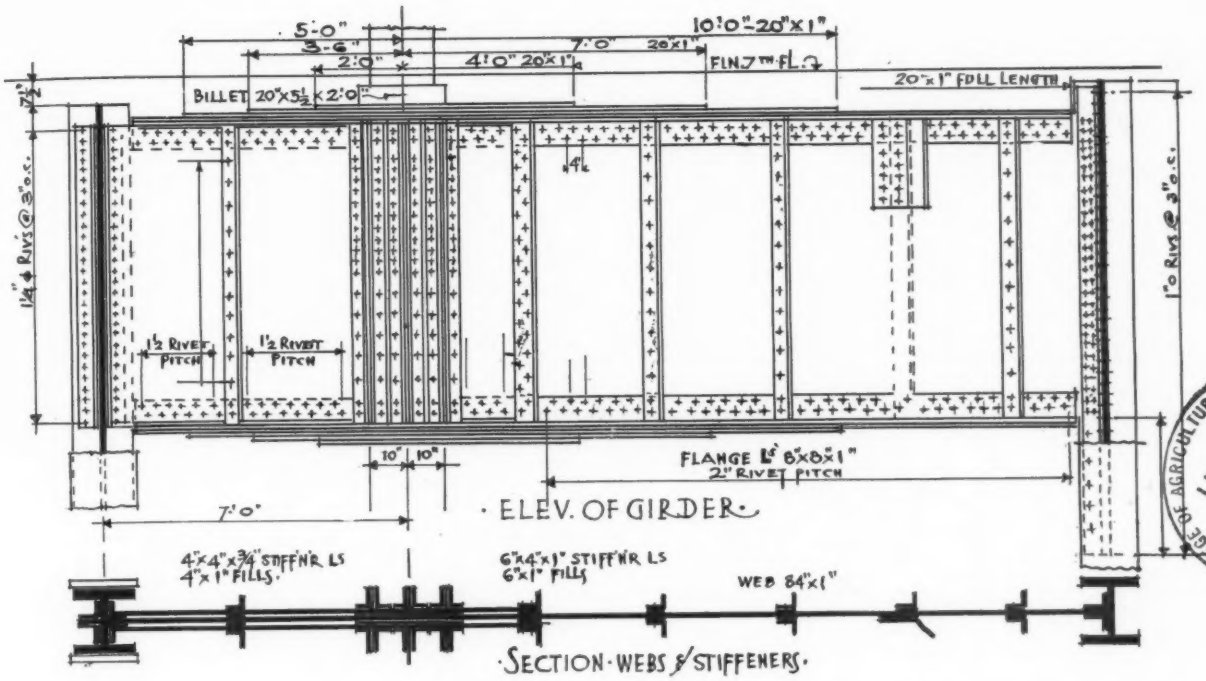
Chief Structural Engineer, Smith, Hinchman & Grylls, Architects, Detroit

CLOSER cooperation between architects and engineers leading to a better understanding of each other's problems would be beneficial. For after all, the architect and the structural engineer are both working toward the same end. They both want to give the owner the greatest value for a given expenditure. But they must keep in mind the fact that an economical structural frame does not always mean an economical building or the most value for the owner's money. It may cost more as far as structural steel is concerned to leave out certain columns in the lower stories or to increase the column spacing, but spending this money will sometimes make the building more desirable and usable for the tenant—in fact it may permit the owner to obtain a rental out of all proportion to the extra structural cost, or it may mean the difference between keeping the building fully occupied as against being only partly rented. Actually the cost of the structural frame is a surprisingly small percentage of the total cost of most buildings.

The writer once worked for a chief engineer who insisted that his office did not design structural work economically, but designed it to meet conditions. That is a thought worth keeping in mind. The structural frame is not an end in itself; it is a means to an end. The only excuse for it is that it is necessary to support, or serve as a skeleton for a building. To serve its function properly it must meet the requirements and conditions of a particular building. If the value of the building, as far as usefulness is concerned, can be increased only 10% by increasing the cost of the structural steel say 20%, it is the proper thing to do because the owner gets 10% more value for 2 or 3% extra cost, depending on whether the structural steel is 10 or 15% of the total cost.

Some of the problems that architects and owners make for engineers and the solutions of these problems are indeed interesting.

On a certain large building the architect desired to use a corner treatment which, if an ordinary H column were used, would require that the corner columns be set in from the center line of the other wall columns. This would not only have caused an objectionable obstruction inside of the building, but it would have made an awkward and unsatisfactory wind bracing connection for the spandrel beams. Therefore, in order to give



STATE COLLEGE OF AGRICULTURE AND APPLIED SCIENCE
LIBRARY
OCT 11 1932
MANHATTAN - KANS.

FIG. 3. Girder supporting an offset column designed with three webs to reduce depth of girder. Slitting the column web to receive the web of the girder, as shown at left, simplified the girder-column connection

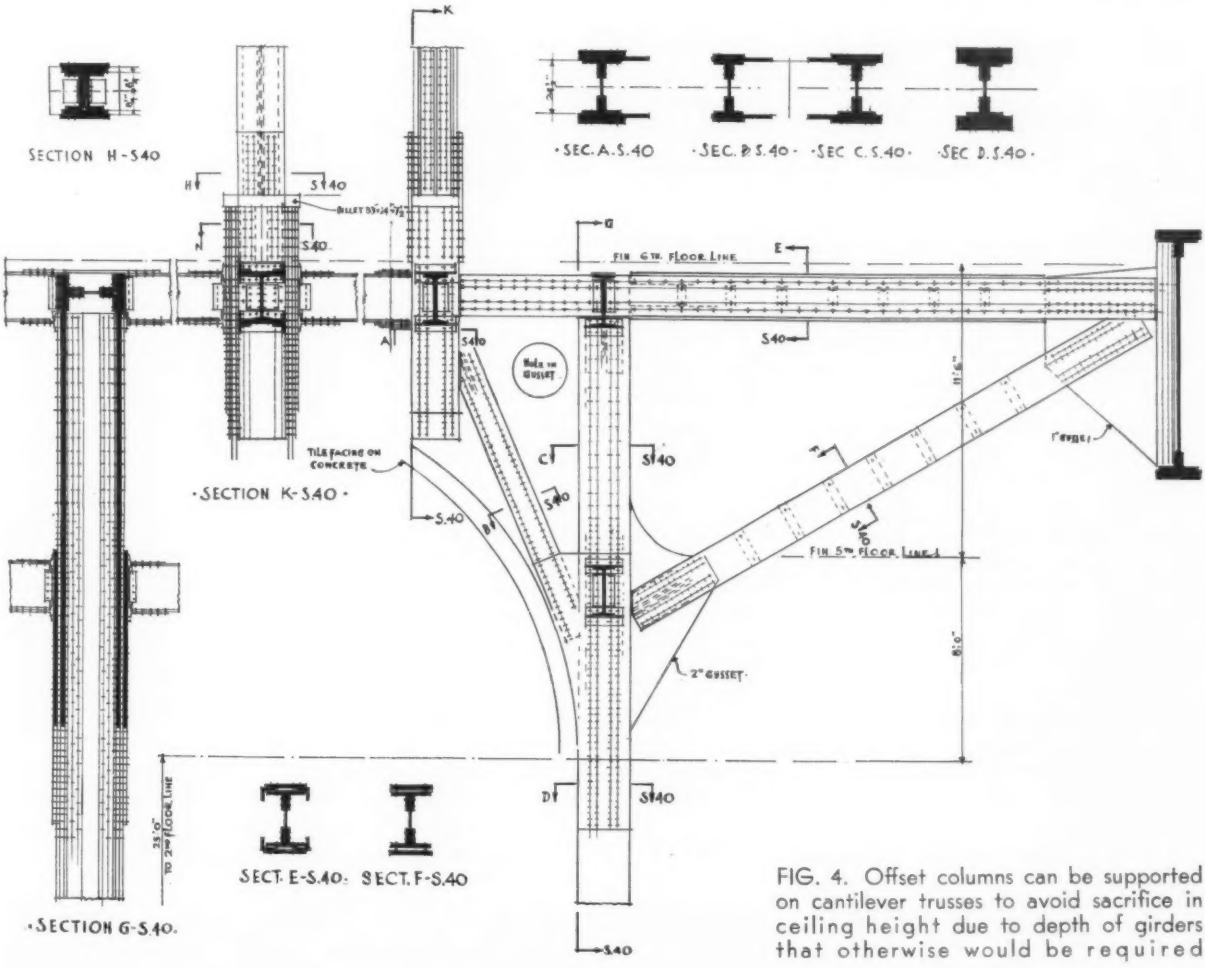


FIG. 4. Offset columns can be supported on cantilever trusses to avoid sacrifice in ceiling height due to depth of girders that otherwise would be required

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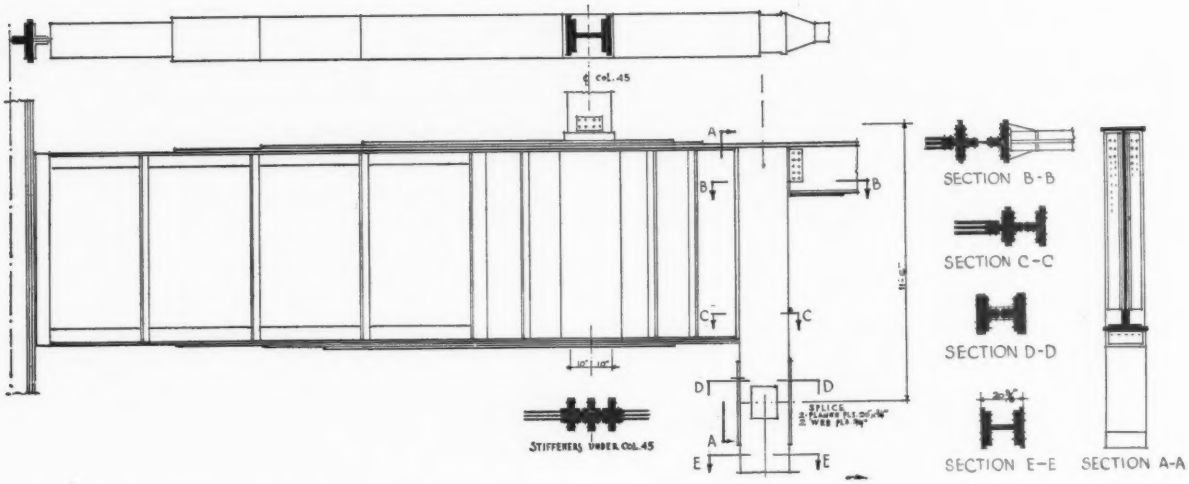


FIG. 5. Field connections of girders with heavy reactions can be simplified by building a short length of column on the end of the girder. This reduces the field connection to an ordinary column splice

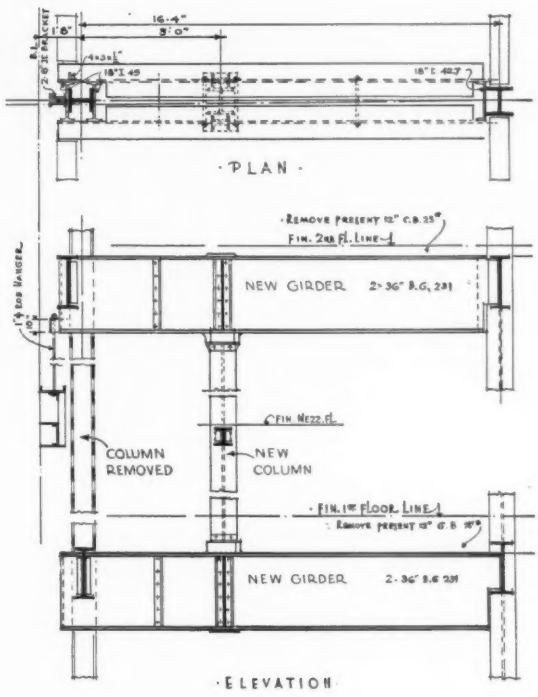


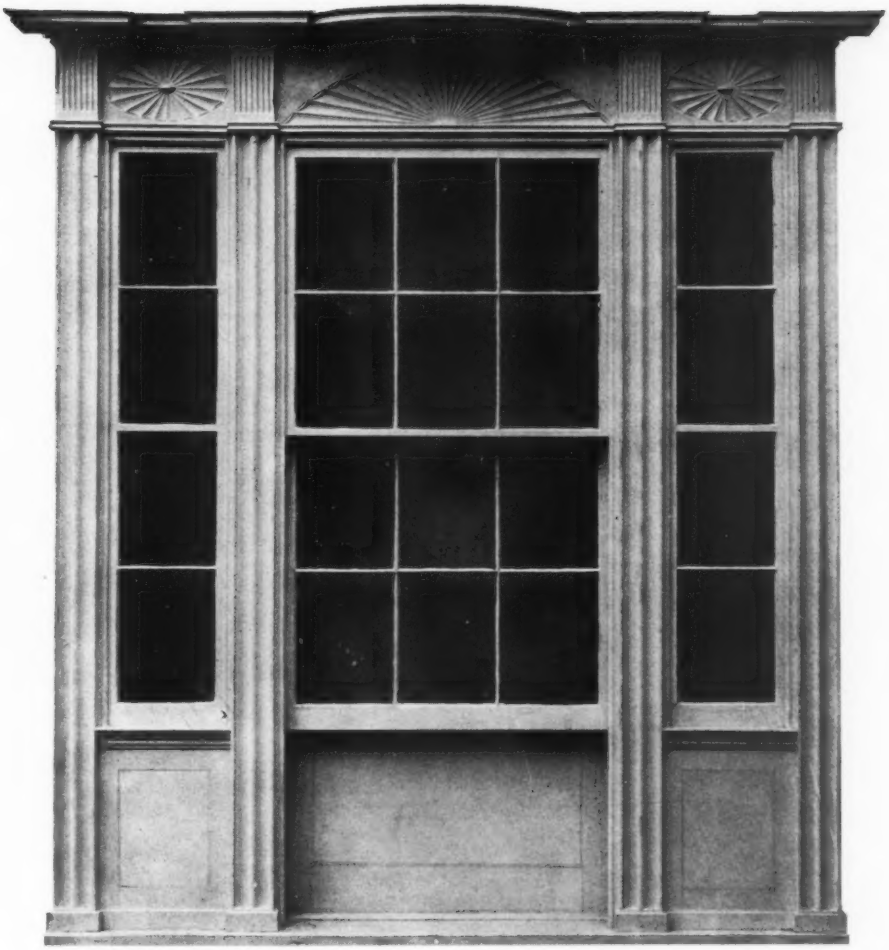
FIG. 6. Change demanded by tenant in new building under construction was solved by welding new girders in first and second stories, building in new column and removing existing column

the architectural designer what he wanted and at the same time give a satisfactory wind bracing connection as well as avoid excessive obstruction inside of the building, a column section as shown in Figs. 1A and 1B was developed. Note that the webs are on the same center lines as the other wall columns and that the spandrel beams can be connected just the same as to an ordinary H column.

IN a large bank building it was desired to have two banking floors one above the other, the lower or secondary banking room a short distance below the street level, and the upper or main banking room a few feet above the street. With the lobby located at the street level it was desirable to keep the floor to floor height to a minimum and at the same time give all possible head room for the lower banking room which is about 150 feet long by 44 feet wide in the clear, with a short span along either side. The floor construction which seemed to meet these requirements better than any other is shown in half section by Fig. 2A. Fig. 2B shows a small structural cross section of the building with this particular floor construction dotted in. Note that an area 150 feet by approximately 44 feet is floored over by a solid slab, without beams, and having a thickness of only nine inches at the center. The ceiling treatment was applied directly to the underside of the concrete.

In many cases it is desirable to have beams of shallow depth and occasionally it is almost necessary that the depth be kept small. In such cases, why not use a column section for a beam if the deflection does not become excessive? An 8BH91 with a depth of 9½ inches has 95% as much strength in bending as an 18BI47, and a 16BH427 with a depth of 18 7/16 inches has 5% more strength in bending than a 36BI190. It is believed that a more liberal use of H's for beams, where shallow depth is essential, would be a reasonable solution.

In the construction of tall buildings it is often necessary to offset columns in the lower stories and in many cases this requires short heavy girders. Also there is usually a premium on a shallow girder. The ordinary plate girder has a center web, flange angles on each side, and cover plates. The rivets connecting the flange to the web are in double shear. In short heavily loaded girders there is usually little difficulty in getting covers enough to take care of the bending moment, even with a shallow depth, but the difficulty comes in taking care of the horizontal shear, or in other words with the connection of the flange angles to the web. Fig. 3 shows a girder with two additional webs added outside the flange angle legs at the end where the shear is excessive, thus putting the rivets connecting the flange to the webs in quadruple shear in place of double shear. This design makes it possible to build a much (*Continued on page* 88)



Triple window from Vaucluse, Portsmouth, Rhode Island, about 1800. Courtesy The Metropolitan Museum of Art

PLATE SECTION

CONTENTS

House of Lewis F. Beers, Danbury, Connecticut
William Webb Sunderland, architect 45

First Evangelical Lutheran Church, Arlington, New Jersey
Martin Graveley Hedmark, architect 49

Alterations of a House for J. Albert Nelson, South Norwalk, Connecticut
Charles S. Keefe, architect 55

Six Stairways 57

House of Allerton H. Jeffries, Los Angeles, California
Gerard R. Colcord, architect 63

Sports Building, Estate of Starling W. Childs, Norfolk, Connecticut
Taylor and Levi, architects 65

House of Helen Willoughby Smith, Darien, Connecticut
Julius Gregory, architect 73

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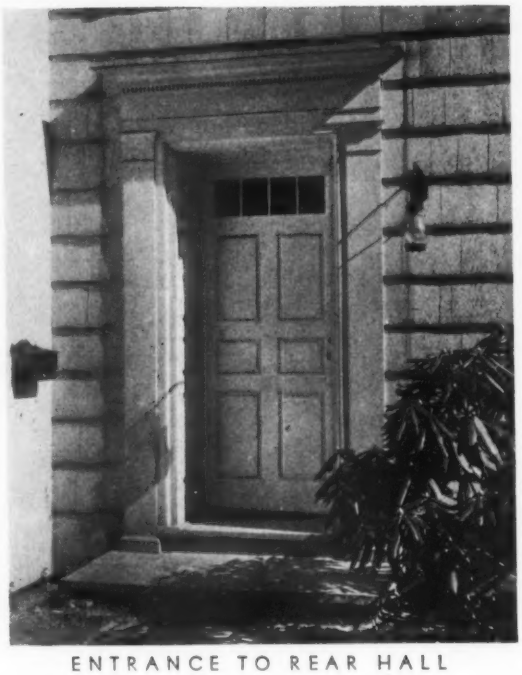
DETAIL OF AN OLD HOUSE NEAR FOREST HILLS, LONG ISLAND

PHOTOGRAPH BY GEORGE VAN ANDA

VAN ANDA



ENTRANCE TO REAR HALL

MAIN ENTRANCE

HOUSE OF LEWIS F. BEERS, DANBURY, CONNECTICUT

WILLIAM WEBB SUNDERLAND, ARCHITECT

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VAN ANDA

STUDY, LOOKING TOWARDS HALL

HOUSE OF LEWIS F. BEERS, DANBURY, CONN. WILLIAM WEBB SUNDERLAND, ARCHITECT

VAN ANDA

ANOTHER VIEW OF THE STUDY

HOUSE OF LEWIS F. BEERS, DANBURY, CONN. WILLIAM WEBB SUNDERLAND, ARCHITECT

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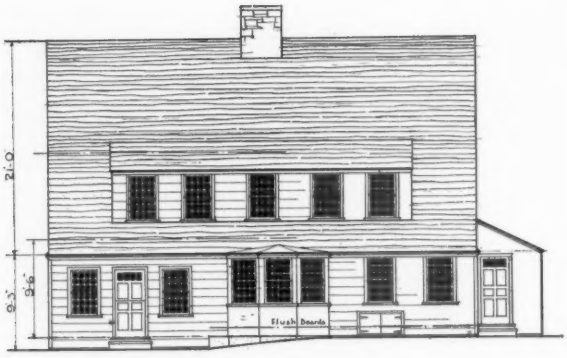
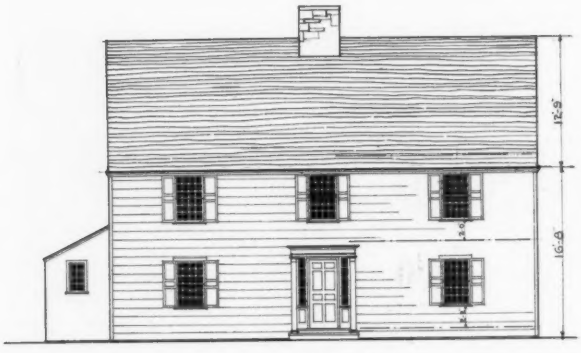
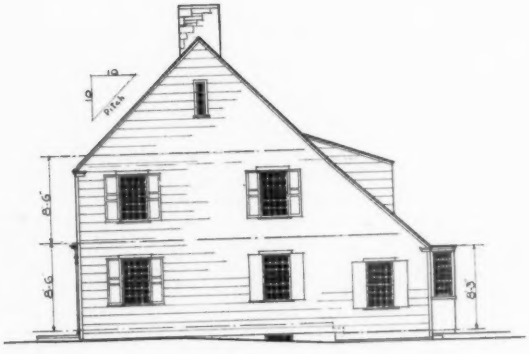
NORTH ELEVATION



EAST ELEVATION



WEST ELEVATION



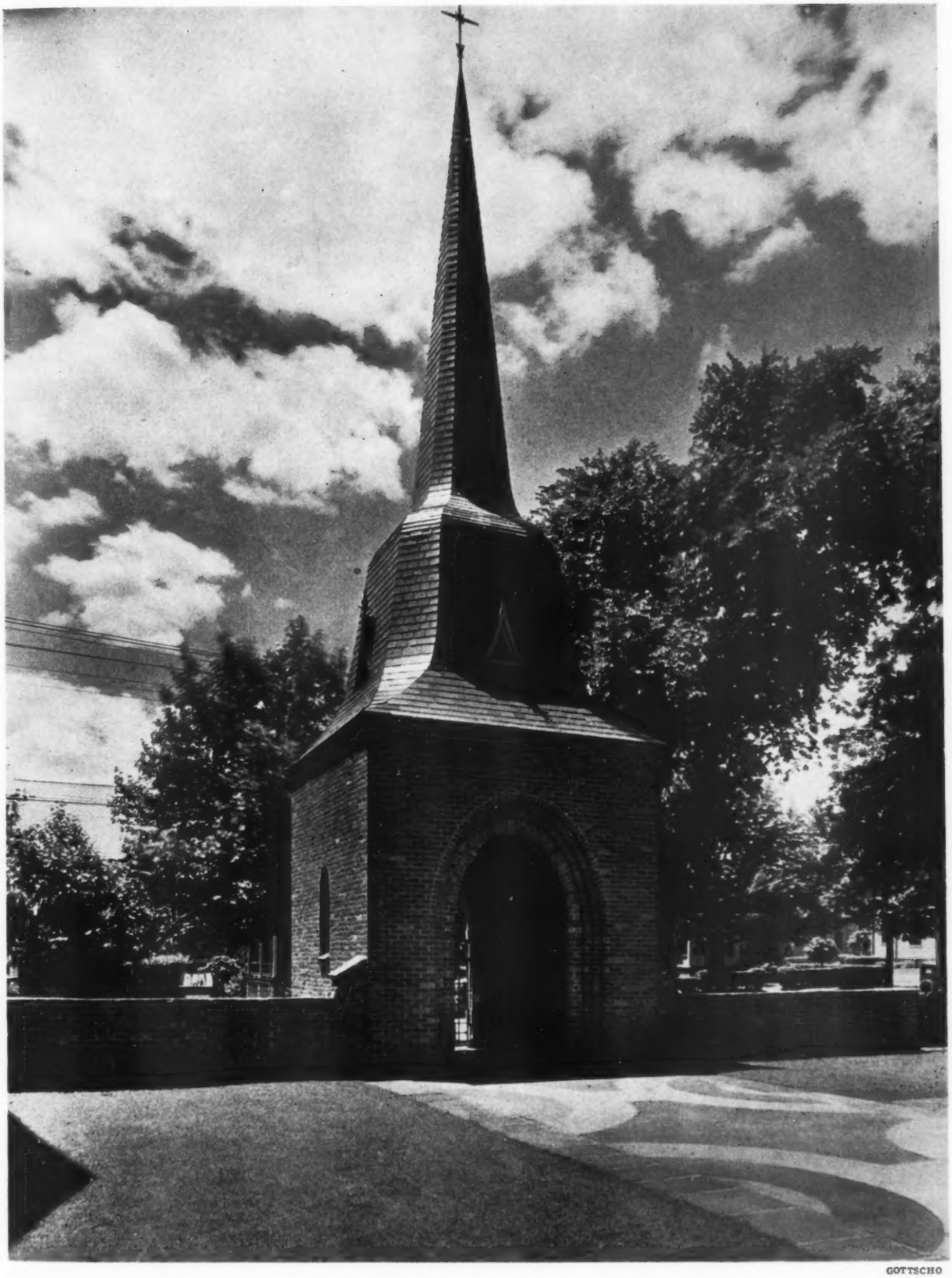
SOUTH ELEVATION

FIRST FLOOR

SECOND FLOOR

THE PROBLEM: To design a house which should be in harmony with a fine collection of early American furniture. Roof, wood shingles left unstained. Exterior walls, 24" cedar shingles laid 10" to the weather and painted white. Bay window and lean-to, matched fir boards. Interior trim, white pine painted dark ivory. Doors, "butt and bead," and battened. Built 1929; 41,500 cu. ft. Cost, excluding finished grading and decorating, 53 cents a cu. ft.

HOUSE OF LEWIS F. BEERS, DANBURY, CONN., WILLIAM WEBB SUNDERLAND, ARCHITECT



GOTTSCHO

FIRST EVANGELICAL LUTHERAN CHURCH, ARLINGTON, NEW JERSEY

MARTIN GRAVELEY HEDMARK, ARCHITECT

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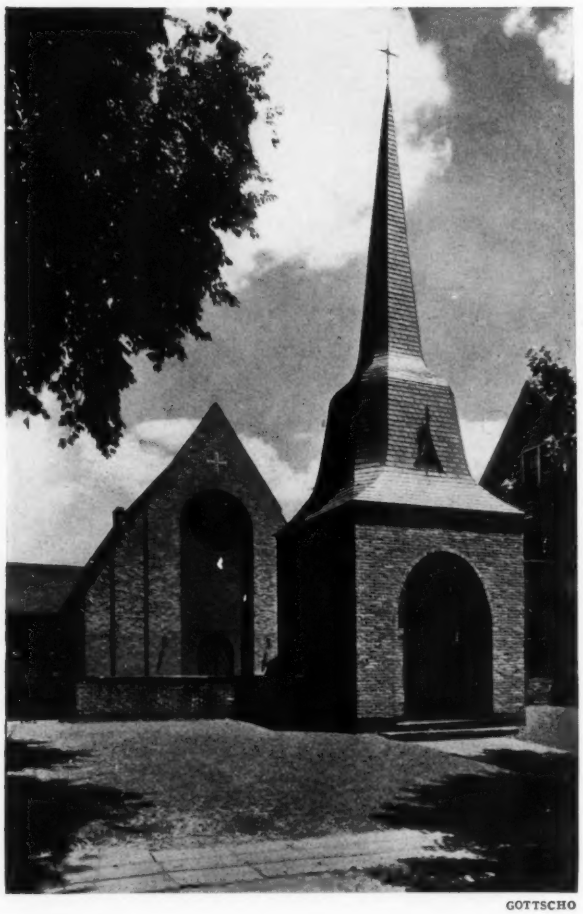

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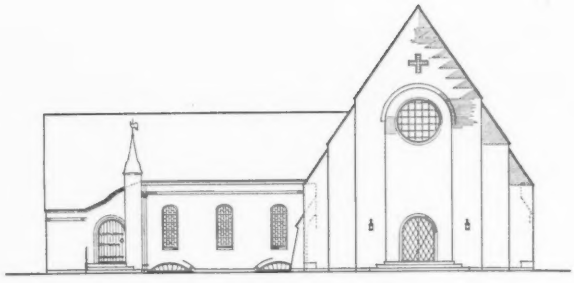
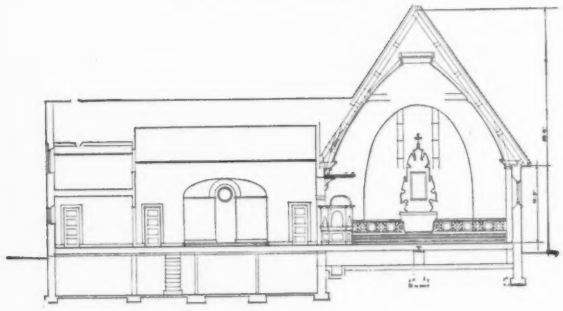


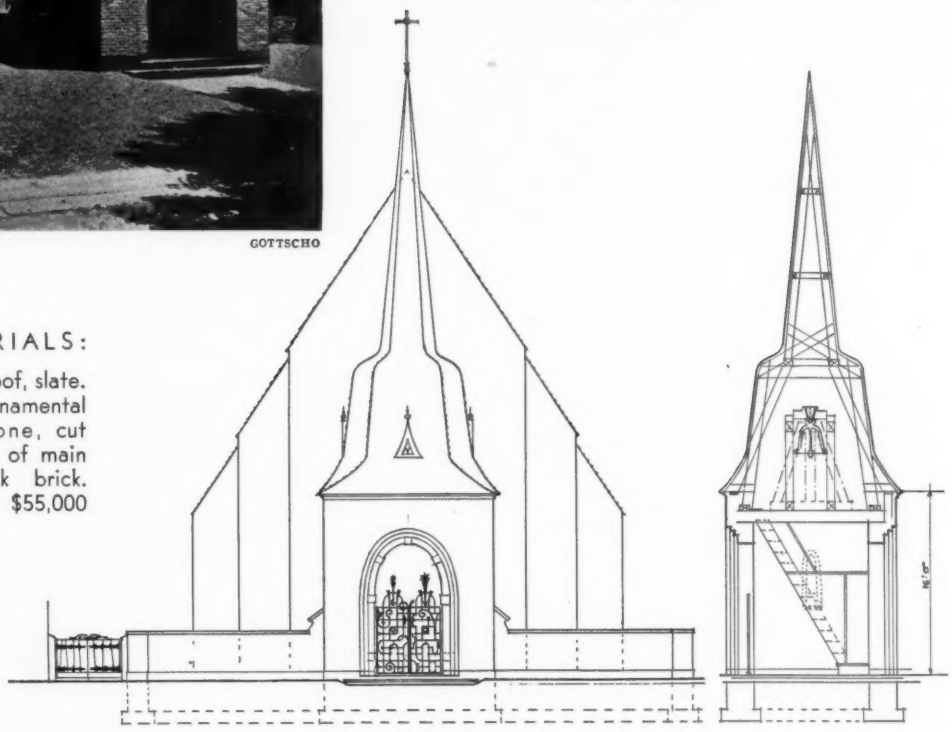
FRONT ELEVATION

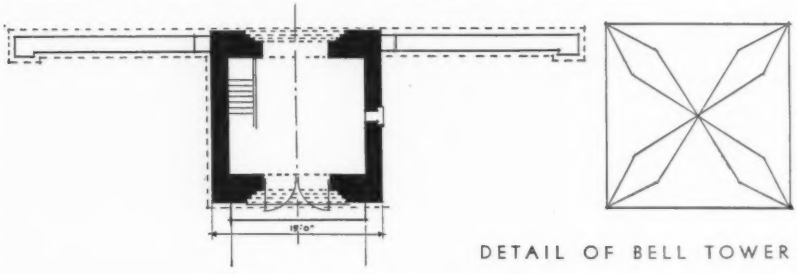


SECTION

EXTERIOR MATERIALS:

Walls, common brick. Roof, slate. Trim and doors, oak. Ornamental cross on gable, limestone, cut diamond shape. Recess of main front of church, black brick. Built in 1930. Cost, $55,000



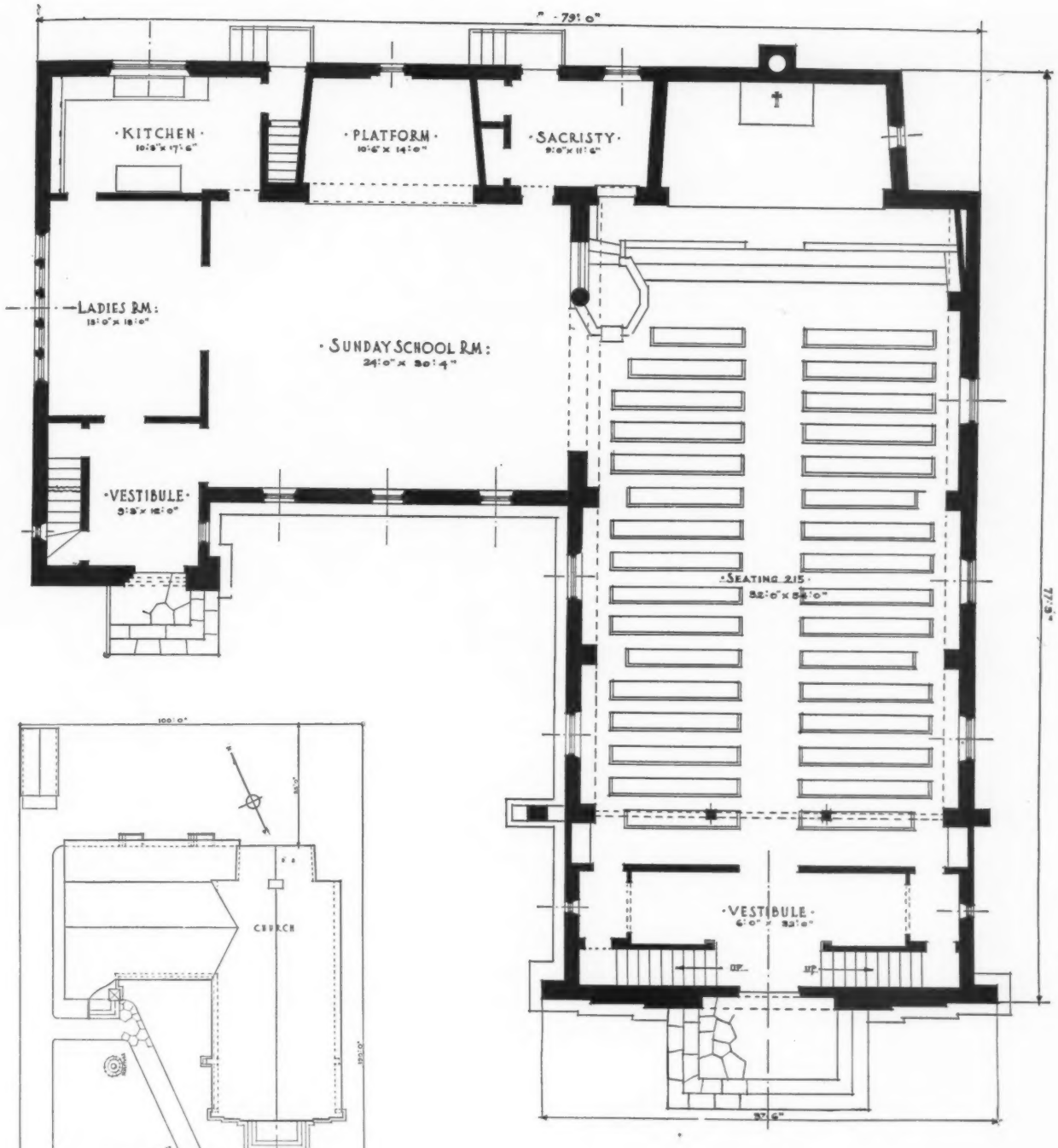


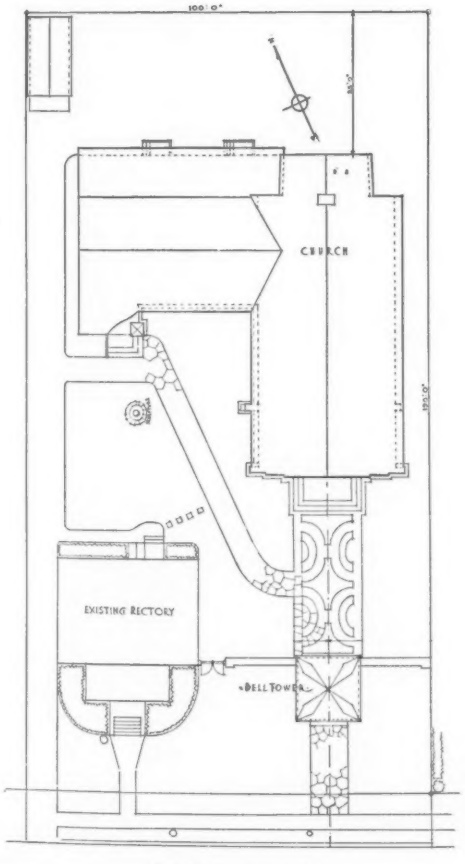
DETAIL OF BELL TOWER

THE PROBLEM:

An existing house, to be used as a rectory, and a garage on the site forced the erection of the church at the rear of the lot. A detached bell tower-entrance was designed to produce the effect of the church being built out to the street

FIRST EVANGELICAL LUTHERAN CHURCH. MARTIN GRAVELEY HEDMARK, ARCHITECT





PLOT PLAN

FIRST EVANGELICAL LUTHERAN CHURCH
ARLINGTON, NEW JERSEY

MARTIN GRAVELEY HEDMARK
ARCHITECT

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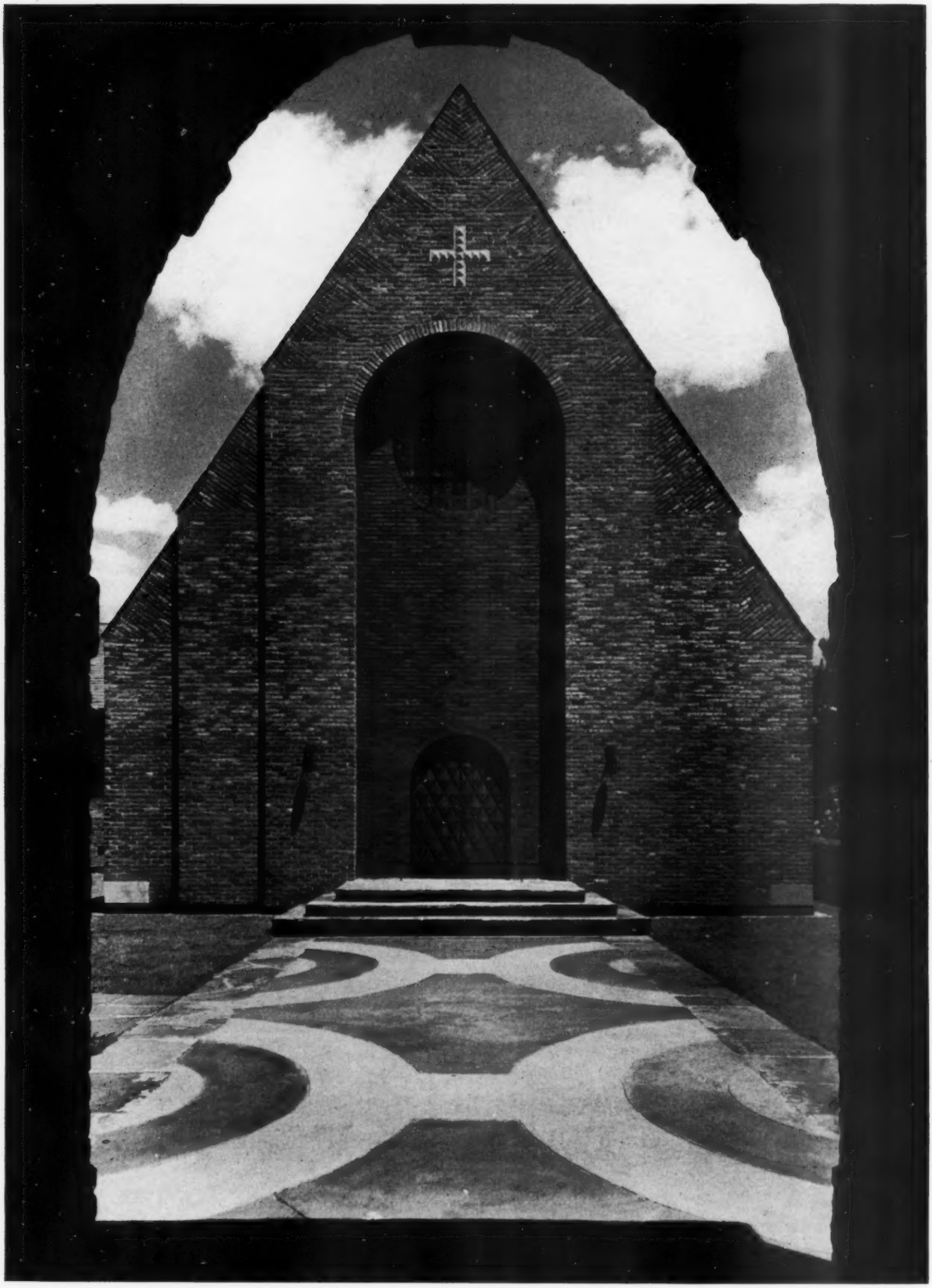
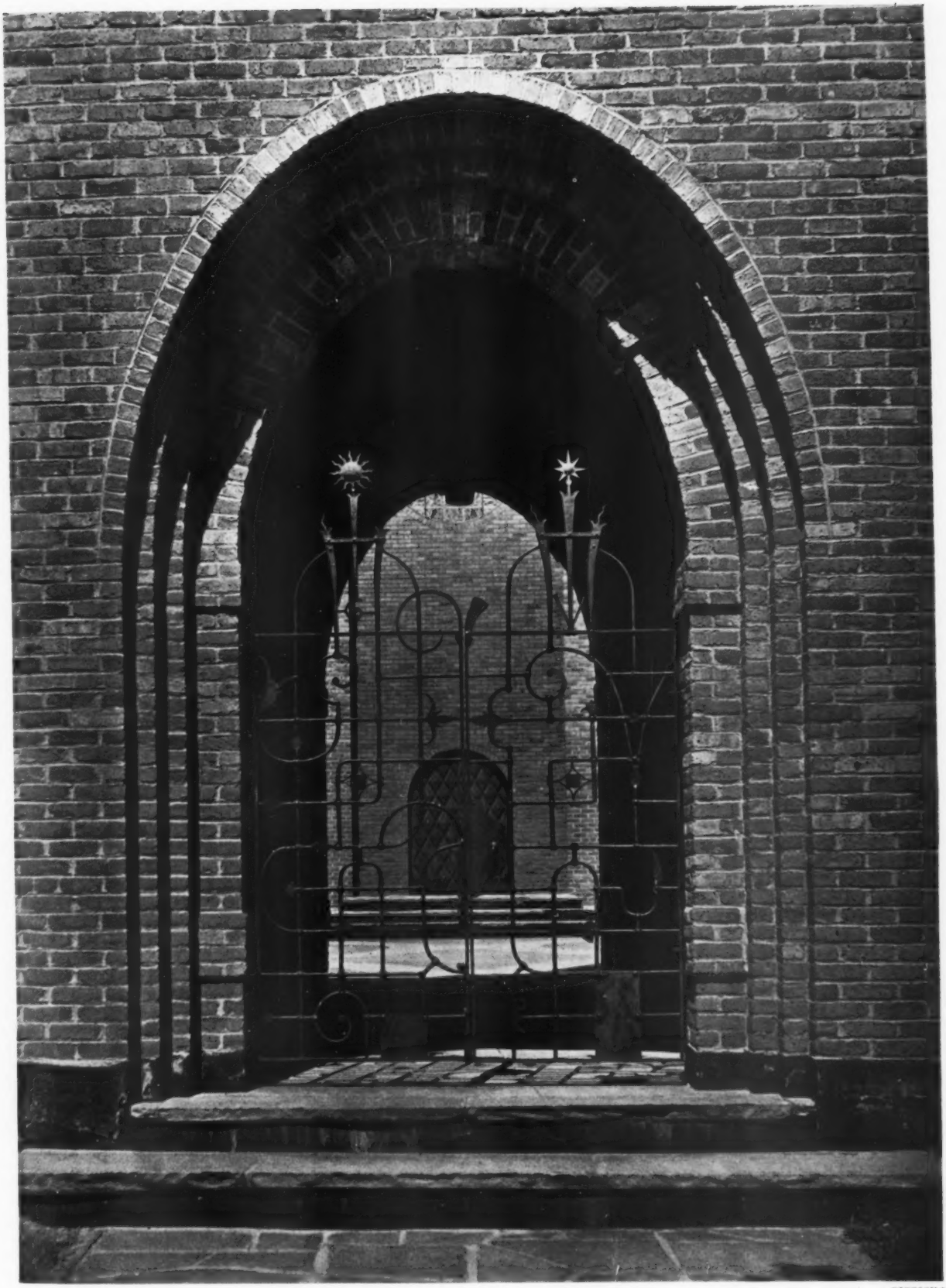


GOTTSCHO

FIRST EVANGELICAL LUTHERAN CHURCH. MARTIN GRAVELEY HEDMARK, ARCHITECT



GOTTSCHO

WROUGHT IRON GATE AT BELL TOWER, FIRST EVANGELICAL LUTHERAN CHURCH

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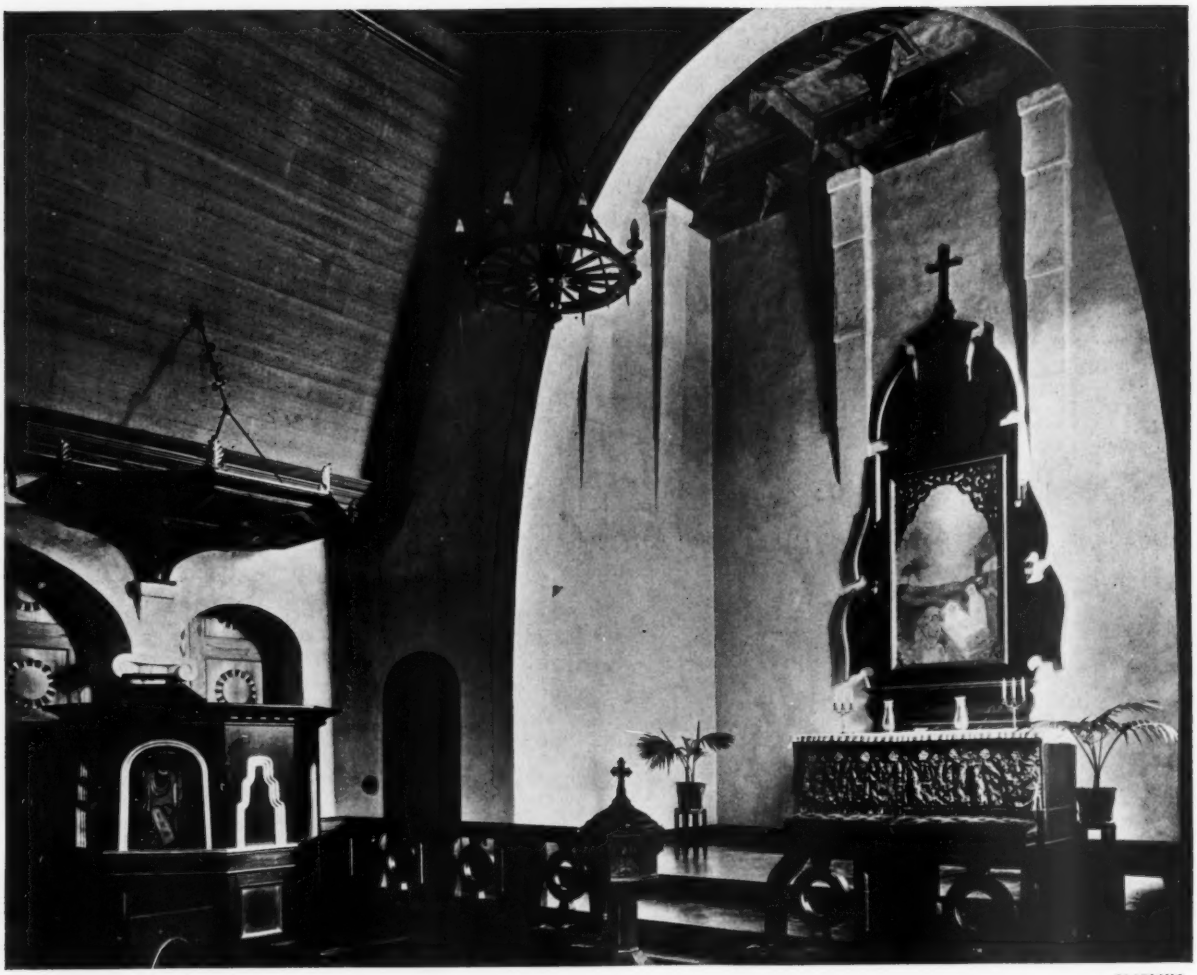

COTTSCHO

INTERIOR MATERIALS: Walls are of hand troweled plaster, sand finish. Ceiling is of wood boards covered with a transparent thin paint, the beams being decorated in American Indian motifs. Lighting fixtures are wagon wheels. Doors are painted black and polychromed. Aisle floor is of cast composition. The sanctuary ceiling is decorated in color. The arch is built of brick and covered with plaster

FIRST EVANGELICAL LUTHERAN CHURCH, ARLINGTON, NEW JERSEY, MARTIN GRAVELEY HEDMARK, ARCHITECT

AFTER

BEFORE

The outmoded original house was difficult to rent. Modernization more than doubled the rent return. Work was done in 1930 at a cost of less than $6,000.

The original house contained 13,600 cu. ft. The modernized house contains 22,600 cu. ft. Work included new floors, trim, doors, windows, etc., also steam heat, bathroom, kitchen sink, range and similar equipment

ALTERATIONS OF A HOUSE FOR J. ALBERT NELSON, SOUTH NORWALK, CONN.

CHARLES S. KEEFE, ARCHITECT

AND APPLIED SCIENCE LIBRARY OCT 11 1932 MANHATTAN KANSAS STATE COLLEGE

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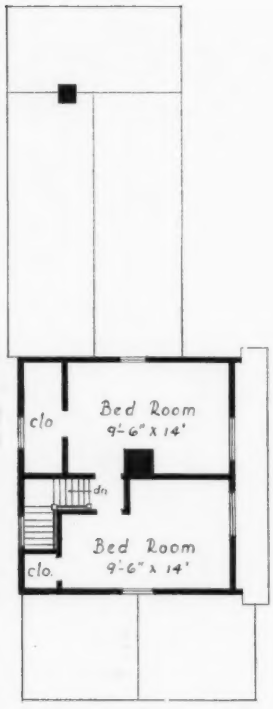
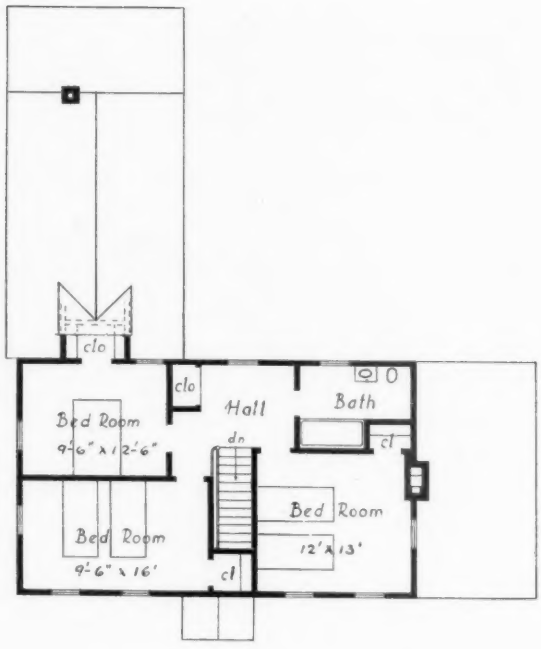
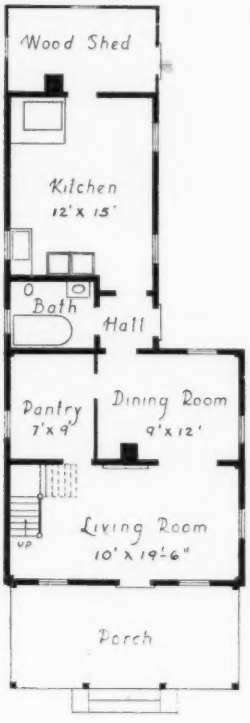
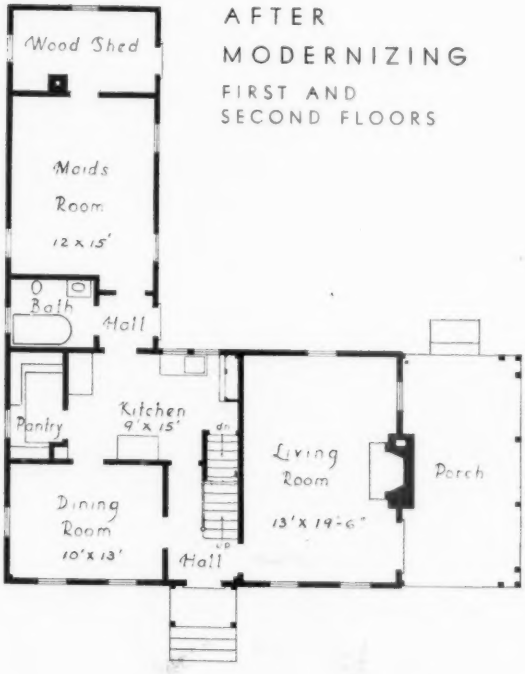


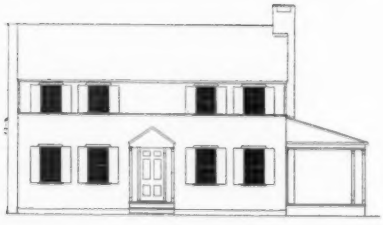




BEFORE
MODERNIZING
FIRST AND
SECOND FLOORS



AFTER
MODERNIZING
FIRST AND
SECOND FLOORS



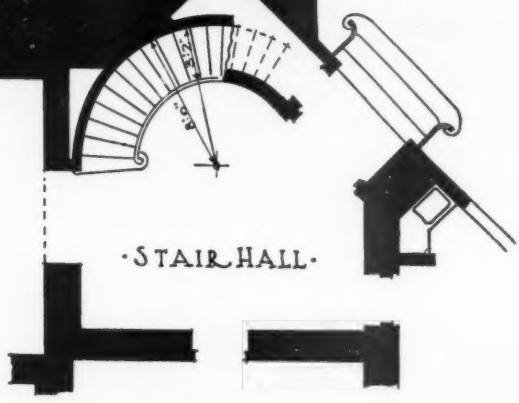
ALTERATIONS OF A HOUSE FOR J. ALBERT NELSON, SOUTH NORWALK, CONN. CHARLES S. KEEFE, ARCHITECT

GLASGOW

Monticello. Thomas Jefferson, Architect

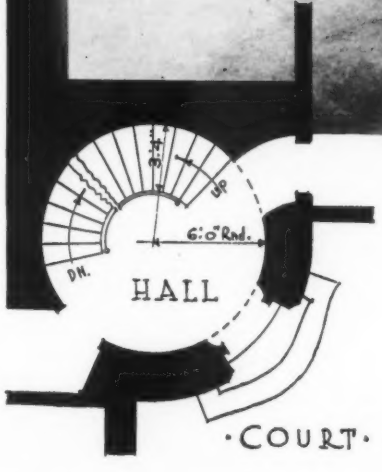
SIX STAIRWAYS

GOTTSCHO



HOUSE OF RICHARD H. GRANT
D A Y T O N, O H I O
PEABODY, WILSON AND BROWN, ARCHITECTS

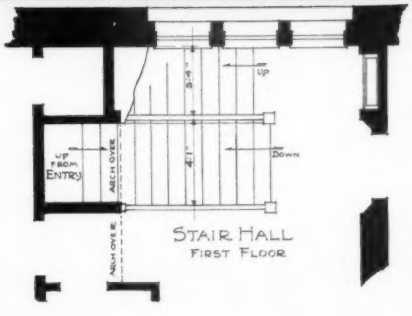
GLASGOW

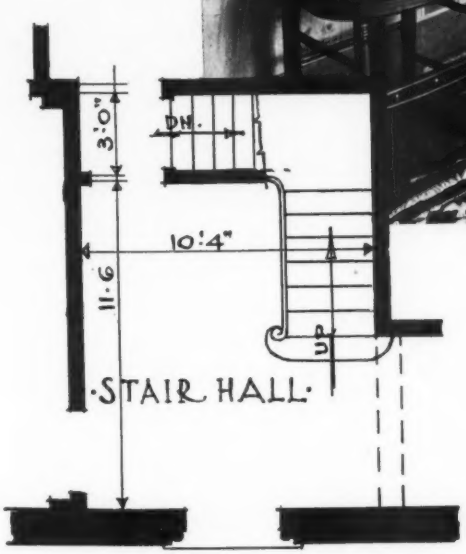


HOUSE OF RICHARD C. BONDY
GOLDEN'S BRIDGE, NEW YORK
LEWIS BOWMAN, ARCHITECT

GOTTSCHO

HOUSE OF LEAVITT J. HUNT
GREENWICH, CONNECTICUT
TAYLOR AND LEVI, ARCHITECTS





GOTTSCHO

HOUSE OF DAVID M. MINTON
PELHAM MANOR, NEW YORK
PEABODY, WILSON AND BROWN, ARCHITECTS

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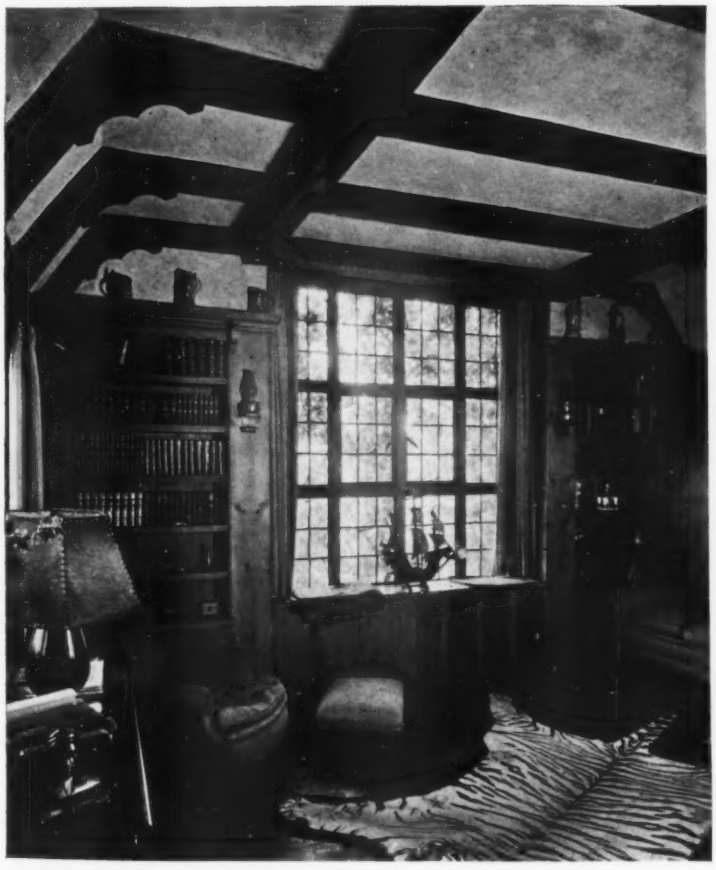
GOTTSCHO

NATIONAL SOCIETY OF COLONIAL DAMES, NEW YORK. RICHARD H. DANA, JR., ARCHITECT

MOTT

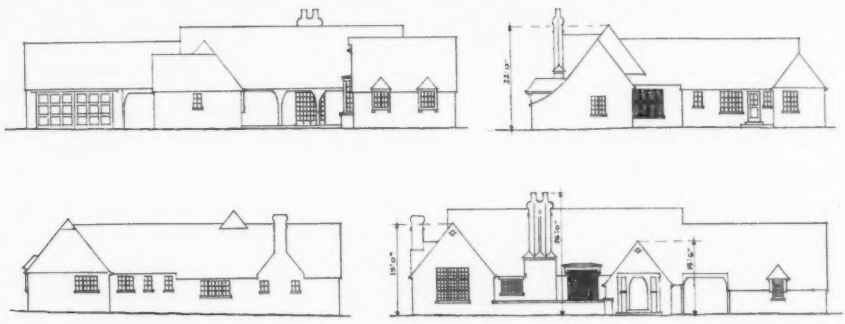


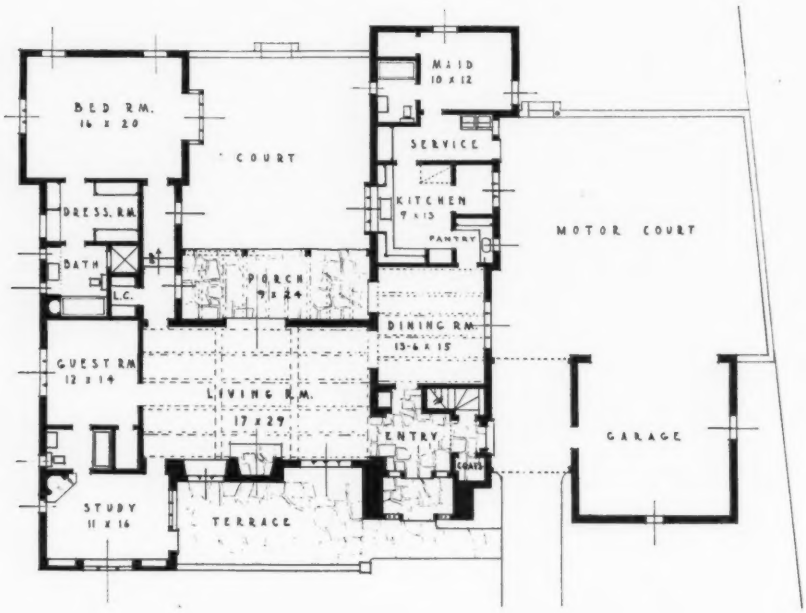
Exterior walls, brick, whitewashed. Roof, hand split cedar shakes with heavy butts stained in various shades of brown and laid irregularly. Timbers and beams, hand hewn. Porches and terrace, also entry hall floor, stone flagging in dull reds and browns. Study, at left, panelled in knotty white pine oiled and waxed to a soft satin finish. Living room, dining room and entry hall have hand hewn beamed ceilings. Living room is a story and a half high

HOUSE OF ALLERTON H. JEFFRIES
LOS ANGELES, CALIFORNIA
GERARD R. COLCORD, ARCHITECT

XUM

MOTT





HOUSE OF ALLERTON H. JEFFRIES
LOS ANGELES, CALIFORNIA
GERARD R. COLCORD, ARCHITECT

SPORTS BUILDING, ESTATE OF STARLING W. CHILDS, NORFOLK, CONNECTICUT

TAYLOR AND LEVI, ARCHITECTS

Photographs by Samuel H. Gottscho

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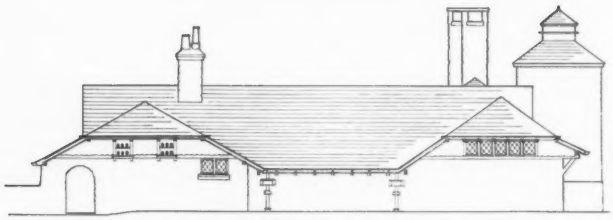
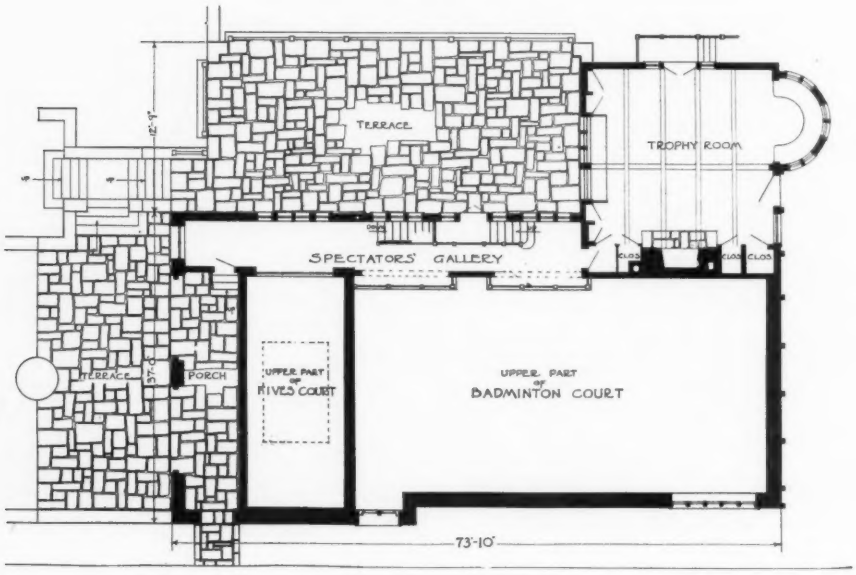
GARDEN ELEVATION

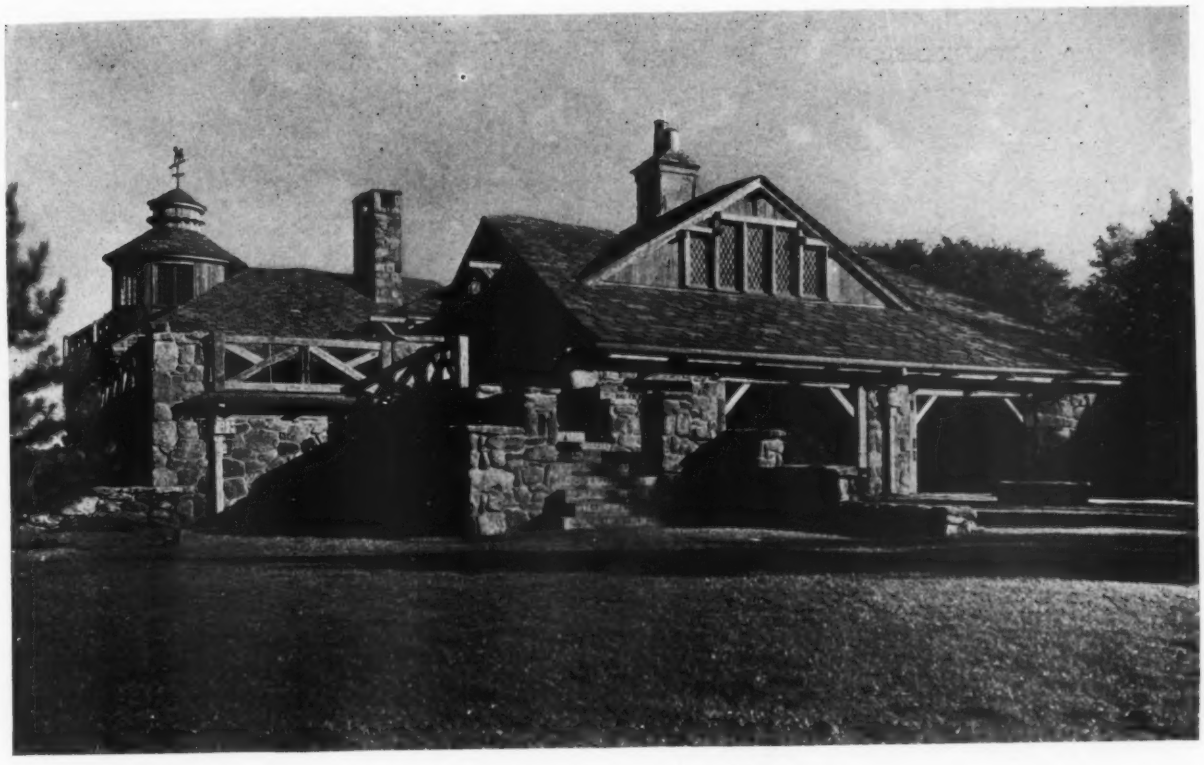


REAR ELEVATION



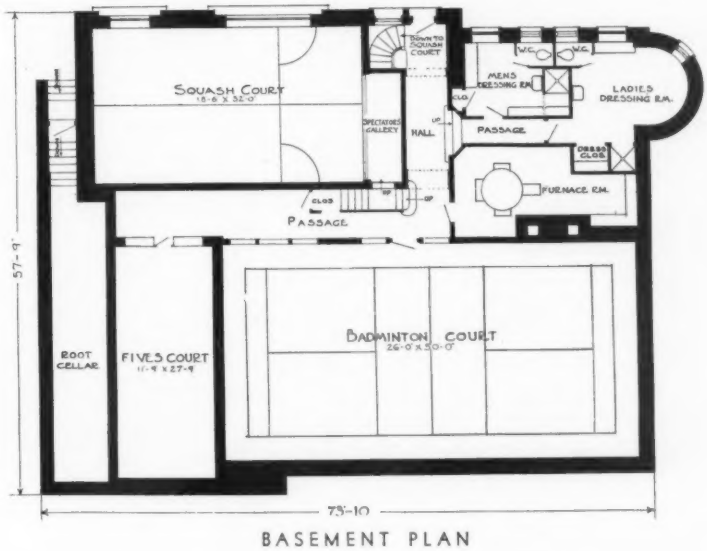
FIRST FLOOR PLAN

SPORTS BUILDING, ESTATE OF STARLING W. CHILDS, NORFOLK, CONN. TAYLOR AND LEVI, ARCHITECTS



SOUTHEAST ELEVATION

FRONT ELEVATION



BASEMENT PLAN

SPORTS BUILDING, ESTATE OF STARLING W. CHILDS, NORFOLK, CONN. TAYLOR AND LEVI, ARCHITECTS

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NORTH ENTRANCE TO TOWER

SPORTS BUILDING, ESTATE OF STARLING W. CHILDS, NORFOLK, CONN. TAYLOR AND LEVI, ARCHITECTS

GALLERY AND TROPHY ROOM TERRACE

EXTERIOR MATERIAL: Field stone walls, hand hewn oak and chestnut timbers, boarding removed from old barns. Slate roof variegated in color, a large proportion of the slate being 2" to 2½" thick. Leaders and gutters, ornamental cast lead. Steel sash. Flat roofs and floor of veranda over roof cellar covered with slate laid in mastic.

INTERIOR: Floor under game court unexcavated, a continuous air space being provided under floor and in back of walls to prevent warping of wood lining; vented by registers in walls. Mastic applied to rough concrete floor and to inside of stone walls before sleepers and wall furring were installed. All interior woodwork, hand hewn timbers and boarding of chestnut and oak removed from old barns. Contains 94,900 cubic feet. Built 1930.

DETAIL OF ARCH AND CHIMNEY

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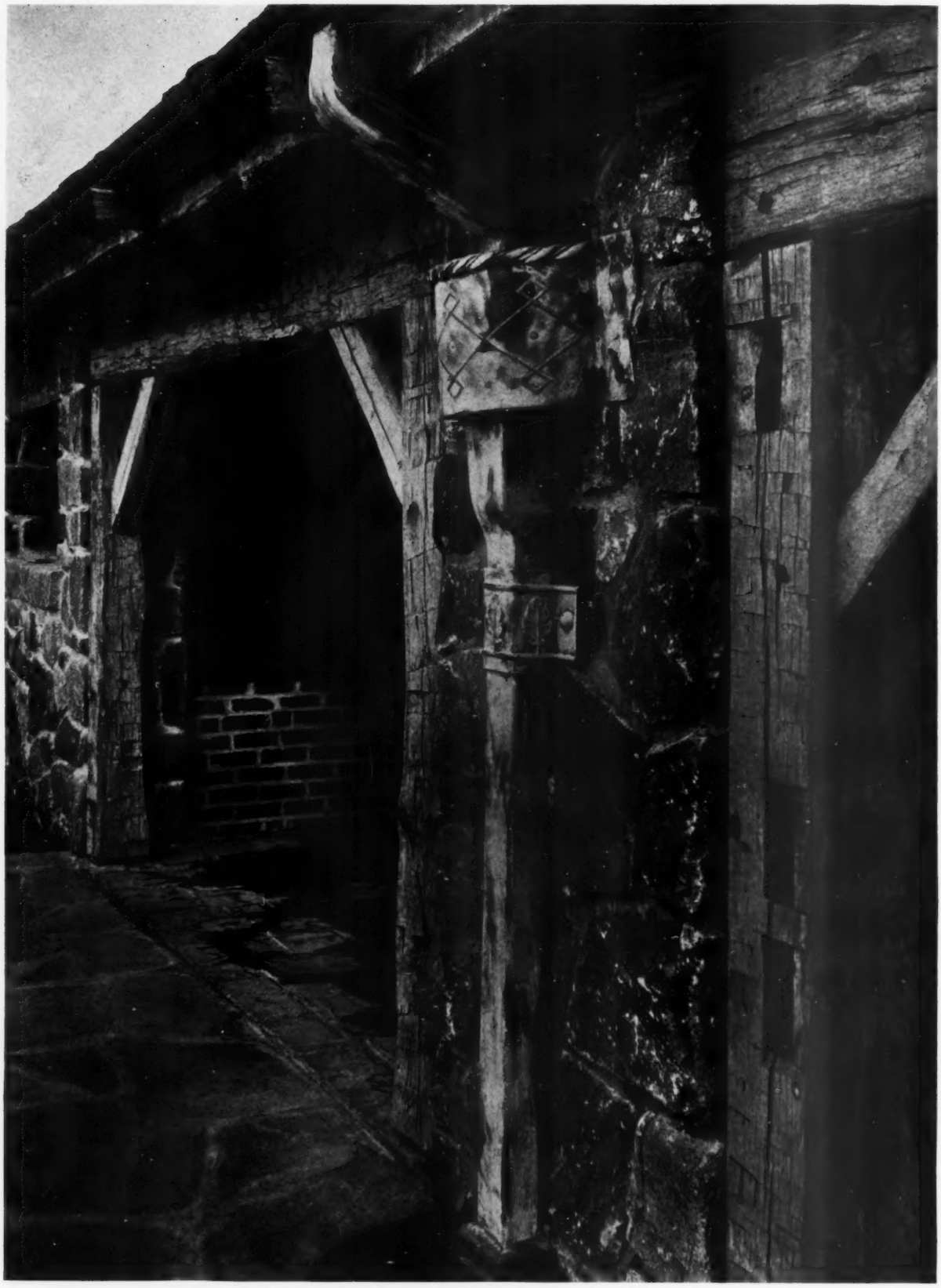

DETAIL OF ENTRANCE AT TERRACE

SPORTS BUILDING, ESTATE OF STARLING W. CHILDS, NORFOLK, CONN. TAYLOR AND LEVI, ARCHITECTS

SPECTATORS' GALLERY AND STAIR

SPORTS BUILDING, ESTATE OF STARLING W. CHILDS, NORFOLK, CONN. TAYLOR AND LEVI, ARCHITECTS

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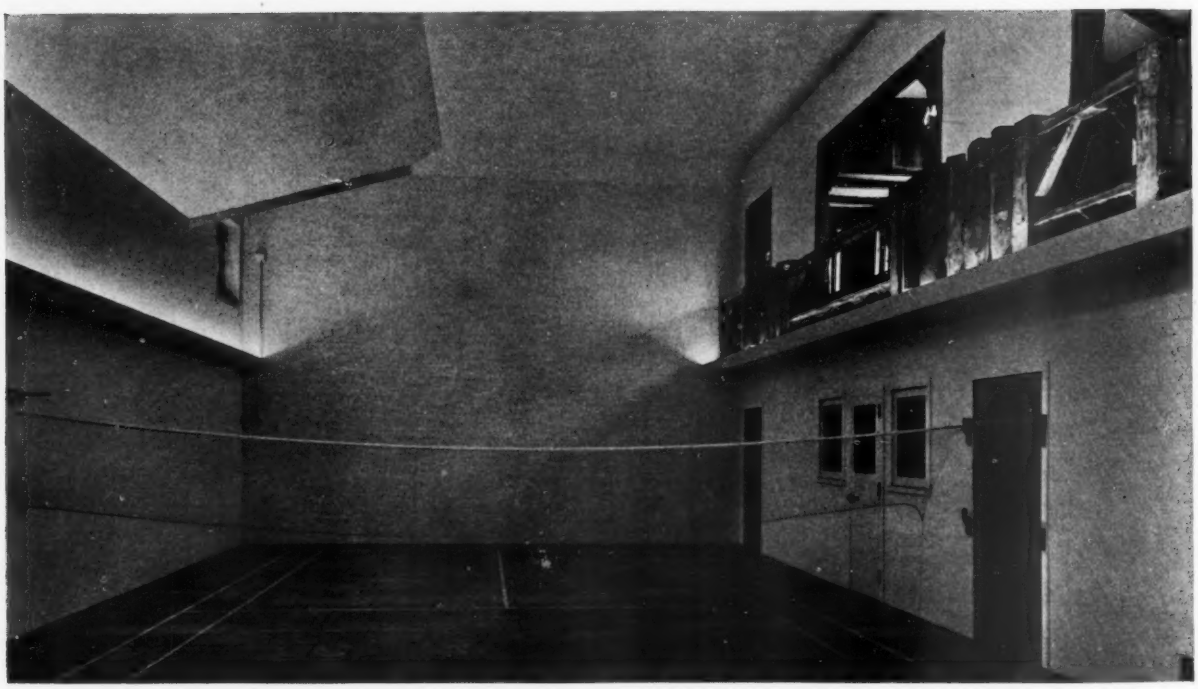
DETAIL OF GAME AND SPORT ROOM



INDOOR BADMINTON COURT

SPORTS BUILDING, ESTATE OF STARLING W. CHILDS, NORFOLK, CONN. TAYLOR AND LEVI, ARCHITECTS

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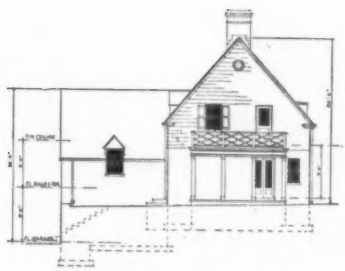
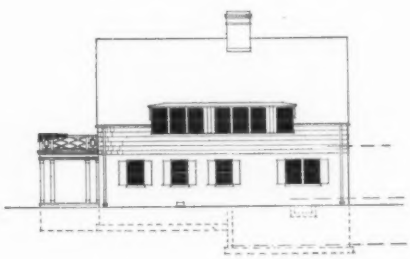
VAN ANDA

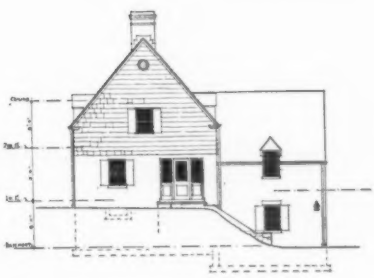
FRONT ELEVATION



SIDE ELEVATION



REAR ELEVATION



SIDE ELEVATION

HOUSE OF HELEN WILLOUGHBY SMITH, DARIEN, CONNECTICUT

JULIUS GREGORY, ARCHITECT

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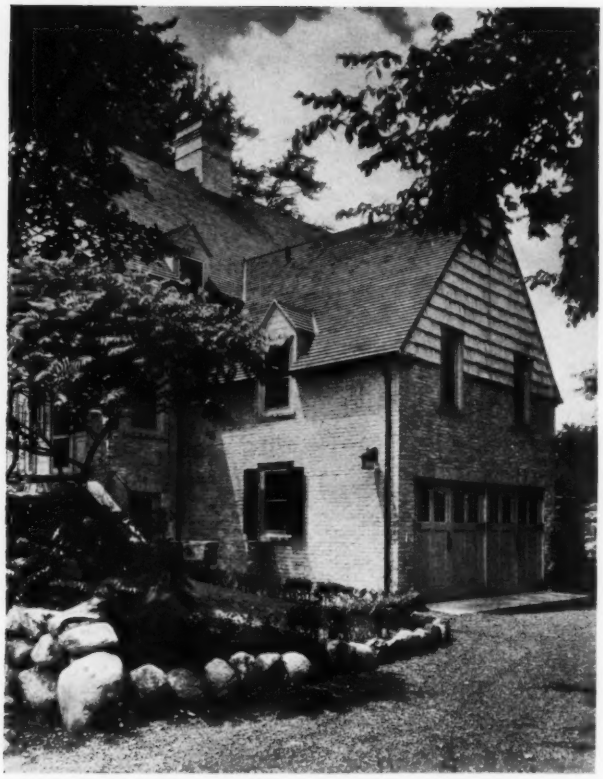

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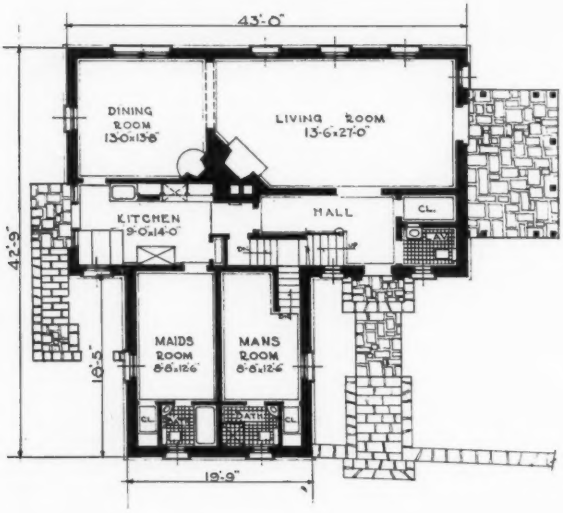
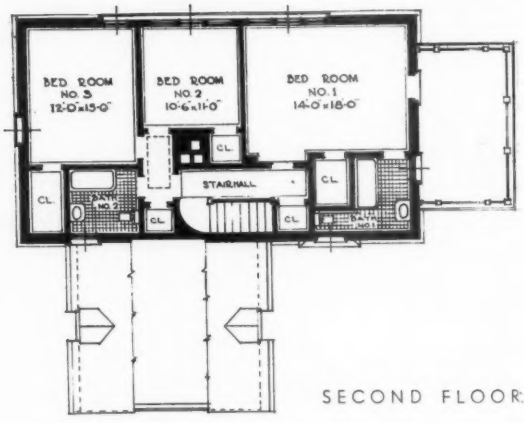


FIRST FLOOR

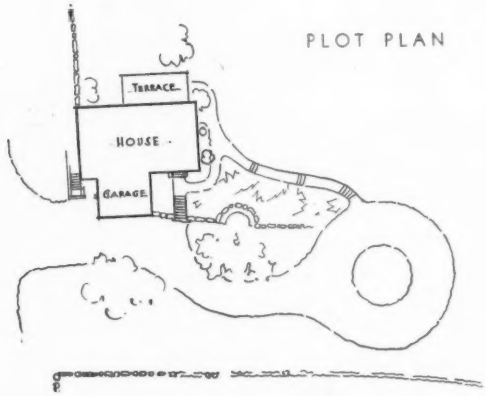


SECOND FLOOR

CONSTRUCTION: Walls of cinder blocks, floors of junior steel beams and reinforced concrete. Wall shingles, light grey whitewashed. Roof, black slate. Interior plaster, slightly rough. Contents: 37,443 cu. ft. Cost 55½ cents a cubic foot. Built in 1930. Site was small and sloping, offering a difficult problem

HOUSE OF HELEN WILLOUGHBY SMITH
JULIUS GREGORY, ARCHITECT

PLOT PLAN



THE READERS Have a Word to Say

• KYSON IS "TOUGH ON US STUDENTS"

Editor, AMERICAN ARCHITECT:

DOES not any one pity the poor student? Judging by Charles Kyson's article in the July issue of AMERICAN ARCHITECT the first thing a group of architects who are "cursed" (I would say) "with a reform complex" think of is piling six or seven more required subjects upon the already overladened students. Everyone wants to tell him what to study as though he had absolutely no ideas on the subject himself.

Consider the plight of an entering freshman at the University of Illinois, for instance. He must pile up 148 credits before he can graduate, seven of which may be of his own choosing. If he feels that he would like to gain a little additional knowledge, in some field in which he is particularly adept, he may do so by extending his course to five years, but in no case will these additional courses be recognized as credit towards his degree.

This extension, however, will not relieve his quota or what is known on the campus as "gripe" courses. Such courses are courses which at one time were offered for the benefit of students who wanted to learn something in a particular field, but by putting them on the required list the interest of the student is destroyed and so is the subject. But this does not daunt our godfathers who gather together at every chance, it seems, in an effort to increase the already overburdened list of required subjects and, I fear,—nothing will.—*Gus Ford, New York City.*

• DOES NOT AGREE THAT STOCK PLANS ARE UNNECESSARY

Editor, AMERICAN ARCHITECT:

I FEEL driven to make some comment on your leading editorial in the August number headed by your dogmatic assertion that "Stock Plans Are Not Necessary," with a further statement to the effect that it is a fallacy to suppose that architects cannot otherwise provide a service which the public can afford.

These dogmatic statements undoubtedly conform to your editorial policy and find favor with many architects who are not interested in getting architectural service to the millions of would-be home owners in our sparsely settled districts. Architects who believe in meeting the conditions that exist and recognize the responsibility of the profession and the Institute toward getting architecture to these millions who have not the access to architectural service which we all realize is necessary to get the best results, have given the subject their attention, study and personal effort.

I will not attempt to argue the matter with you in this letter as you already have full access to my ideas on the subject. In the August 1929 issue of the Architect and Engineer, I presented the situation as I saw it with the need for stock plans in answer to some expressions in their columns in line with the statements in your editorial. I asked some direct questions which I hoped would occasion reply in a subsequent number, but no attempt at reply appeared in any subsequent issue or in the discussion in "Pencil Points," which copied what I had said in the Architect and Engineer as a contribution to their discussion.

So far, to my knowledge, no attempt at reply has been made to these reasons for stock plans, nor have any constructive suggestions been made to otherwise meet the actual conditions throughout the country. Without these, I do not believe the assertions in your editorial can be expected to settle the matter in the minds of many of us who have given much earnest study to the subject. —*Charles H. Alden, F. A. I. A., Seattle, Washington.*

• DISAGREES WITH MR. DALTON

Editor, Motor:

REFERRING to your interesting article in the September issue of AMERICAN ARCHITECT, you seem to have reversed your opinion, as only some three months or so ago you seemed to think there could be no recovery until building costs and rents were further drastically reduced.

However, they have not since been reduced appreciably, and if your present opinion is correct, they are quite likely to stiffen and then increase.

I do not agree with you when you refer to a "saner estimate on the part of the architect as to the value of his professional services," as the architect is decidedly the most underpaid professional man there is, and even at the inadequate fees mentioned in the New York A. I. A. Schedule. Apparently you are very much misinformed on this subject.—*Arthur T. Remick, Architect, New York.*

Editor's Note: A copy of the above letter was sent by Mr. Remick to the Editor of AMERICAN ARCHITECT.

• WILL FEDERAL GOVERNMENT EMPLOY ANY OUTSIDE ARCHITECTS?

Editor, AMERICAN ARCHITECT:

IN the absence of Assistant Secretary Heath, acknowledgment is made of your letter of August 22nd stating you have been informed "The U. S. Treasury Department at Washington has decided to design all new public buildings as they claim no money was appropriated for the work to be done by outside architects."

In this connection you are advised that the question is now before the Comptroller General for a decision.—*F. A. Birgfeld, Chief Clerk, Treasury Department, Washington, D. C.*

XUM

American Architect
Reference Data

NUMBER TWO—OCTOBER, 1932

INTERIOR WALLS AND WALL FINISHES

A Guide to the Selection and Use of Wall Construction and Finishing Materials

■ The purpose of this study of materials used in the construction and finishing of interior walls is to bring together and collate for the architect's convenience information of reference value for use when selecting and specifying such products. The following text and reference tables cover the basic considerations involved, while the advertising pages that follow have been especially prepared to give the architect factual data relating to the materials herein presented.

TODAY any type of decorative effect can be produced on any type of interior wall without much regard for the character of the underlying construction. This freedom from limitation in selecting decorative treatments has resulted from the development of many new materials, including some that are logical alternates for conventional products, or that reproduce their appearance with more or less fidelity. Nevertheless, there is often a direct relationship between the ultimate wall finish and the character of the wall construction, which, if properly recognized, may result in definite construction and decorating economies.

SELF-FINISHING MATERIALS

A GROUP of structural products such as brick, terra cotta and stone in suitable forms are self-finishing in the sense that they require no surface treatment after erection, and at the same time are self-supporting.

Into this category of self-finishing structural walls and partitions fall a number of very recent developments in construction methods involving two or more materials, each especially adapted to the others and assembled to constitute a complete wall. Such, for example, are the new light steel partition frames with special attachment devices for carrying asbestos cement, plywood or other rigid panel materials which may be self-finished, lacquered or painted, or prefinished before erection. Heavy plywoods, metal or veneer faced, may also form self-supporting partitions after the manner of marine practice.

Otherwise, between the structural framework of a building and the finished decorative surface, there must be an intervening foundation material. The selection of this base is affected both by the nature of the construction and by the character of the finish to be ultimately superimposed.

This relationship of wall finishing materials to the underlying foundation or intervening base is developed in reference form in Table I.

CHARACTERISTICS OF WALL FOUNDATION MATERIALS

ONE purpose of interposing a base material between the structural frame or wall and the finished decorative surface is to secure true wall planes. It is mechanically difficult to align wood studs in frame construction so that their faces touch a common plane at all points. Unless special care is taken in the erection of the frame, the use of a base material of uniform thickness, such as a wallboard, may reveal the structural irregularities in the finished wall surface. It is for this reason that plaster is commonly employed to take up and to conceal the imperfect alignment of a structural wall and to produce through its plastic character a working surface that is substantially a true geometric plane.

The same condition usually holds with respect to structural masonry walls, such as those of brick, terra cotta, hollow blocks or monolithic concrete. In both masonry and wood frame construction, however, furring strips may be employed to take up the irregularities of the structural wall, as well as for attachment or insulation purposes.

PLASTER BASES . . . Plaster may be applied direct to any masonry surface having sufficient texture or porosity to provide a bond; to lath in any of its numerous forms or to plaster boards and many types of insulating boards.

Lath-type plaster bases, including wood lath, metal lath and wire fabrics, hold plaster to the structural wall by means of a *mechanical* bond. Certain of the metal laths and wire fabrics become so completely embedded in the plaster as to make them serve as a reinforcement as well as a bonding material. Recent developments in metal laths and wire fabrics largely center around the addition of a backing material designed to eliminate waste of plaster required for bonding purposes, to assure complete embedment of the metal for reinforcing and

protective purposes, or to act as a heat insulator or dampproof membrane.

The reinforcing qualities of metal lath have led to their general use for protecting places where plaster comes under stress, such as at ceiling lines, at reentrant and exterior angles, and over the joints of plaster boards or insulating boards used as plaster bases. Metal lath is also generally employed throughout where maximum plaster reinforcement and fire protection are required. Accessory elements include protective corner beads and metal base mouldings, trim, etc.

Board-type lath, including gypsum wall boards, fibrous plaster boards and insulating boards used as plaster bases, hold and support the plaster by *surface adhesion* rather than by embedment or mechanical bond. The rigidity and strength of the plaster base is imparted to the plaster surface, the weakest point normally developing in the joints between boards, which are usually reinforced or thickened for this reason.

True plaster boards are made of gypsum plaster enclosed between two sheets of paper to which plaster will adhere. Many fibrous, rigid insulating boards are used as plaster boards in addition to their primary function as an insulating material. Board form insulation used as a plaster base is usually furnished in small sizes (approximately 18″x48″) with ship-lapped, beveled, or other prepared edges. The joints thus formed give added thickness to the plaster at these points. Such boards are laid to break joints on the wall. The choice between these various board type plaster bases should be based first on their strength, rigidity and bonding characteristics as a support for plaster, and on their fire resistance, freedom from the deleterious effects of moisture and the means employed to secure adequate strength at the joints.

PLASTERS . . . The basic types of plaster are lime, gypsum, and Portland cement plasters. In addition there are Keene's cement (a dead burned gypsum) and many forms of ready-mixed and patent plasters.

Characteristics of lime plasters are: No water is actually used in the hardening process; hence all free water must be evaporated. Setting, however, will not take place unless water is present; hence quick drying as well as excessive dampness is detrimental to proper curing. The relatively slow setting characteristics of finishing lime plasters permit them to be used for work that could not be accomplished with quick setting plasters, such as gypsum and Portland cement. Since lime plaster is weakly alkaline when wet, it aids toward preventing the corrosion of metal in contact with it. Lime plasters are not usually recommended by insulating board manufacturers because of their excessive water content. Quick lime and hydrated lime should conform to the current specifications issued by the American Society for Testing Materials, Nos. C5 and C6 respectively.

Characteristics of gypsum plaster are: Pure calcined gypsum paste hardens in ten minutes, requiring the use of a retarder to extend the setting period to two hours or more for proper working. The hardening reaction is completed before the water gets a chance to evaporate; hence gypsum plaster can be used in excessively dry locations. It will not harden properly under excessively and continuously damp conditions. It is less resistant to heat than lime plaster. Unless hydrated lime is employed in the gypsum plaster mix, an acid reaction injurious to metals may develop under certain conditions. Gypsum plasters should meet the requirements of the standard specifications issued by the American Society for Testing Materials, Nos. C28-21.

Characteristics of Portland cement plaster are: Portland cement uses a large amount of water in its hardening process, and for complete hydration a sufficient supply of water must be maintained for many days. Consequently, Portland cement plaster is peculiarly adapted for use under continuously and excessively damp conditions. It is the strongest and hardest of the plasters, but its use is ordinarily limited in interior work to the formation of a base or mortar for setting ceramic tiles and other masonry products.

Ready-mixed and patent plasters may be either of gypsum or lime character, or mixtures of these materials in various proportions with or without Portland cement. Complete ready-mixed dry plasters have the proper proportion of sand or fibre and require only the addition of water. Advantages include machine mixing under expert supervision with assurance of greater uniformity than hand mixed plasters. Where a good local sand can be obtained cheaply it may be disadvantageous to pay the extra cost of transporting the sand employed in these ready-mixed plasters.

WALLBOARDS AND INSULATING BOARDS (USED WITHOUT PLASTER) . . . Wherever the satisfactory alignment of the wood framing or structural wall can be secured (either in construction or by the use of furring strips), wallboards of any type may be employed as the *intermediate* foundation for decorative finishes without the use of plaster. Practically all plaster boards and rigid insulating boards may be used for this purpose. Properly installed, they will serve as a satisfactory base for plastic paints, for the heavier wall fabrics and wall compositions, as a support for wood blocks, leathers and phenolic (hard fibre) wall panels. With carefully filled and sanded joints they may also be used as a base for wallpapers and wall fabrics. In the latter cases, however, slight imperfections in the surface of the boards or in the formation of the joints will show through the wallpaper or fabric. A lining of heavy fabric or a strong (1½ pound or heavier) dry building felt is recommended under all wallpapers and the lighter wall fabrics. For low cost work these wallboards, preferably lined with a strong cloth fabric, may be employed to receive painted finishes. Furthermore, many insulating boards have surface textures and colorings permitting them to be used for finished effects in their natural state, or they may be painted, stained or glazed to achieve distinctive decorative effects without the use of any covering material. Joints may be covered with mouldings or batten strips of the same material or of wood.

Plywood constitutes a distinct type of wallboard having uses and applications identical with those above enumerated. It is frequently employed for ceilings where maximum durability and freedom from cracking is sought. Commercial plywoods may be left natural, or stained or painted; or they may be veneered.

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TABLE I . . . TYPES OF WALL FINISHES

According to Underlying Foundations

1. SELF-FINISHING STRUCTURAL MATERIALS (forming structural walls or self-supporting partitions)

Common and face brick.
Enameled and porcelain glazed brick.
Salt glazed brick.
Architectural terra cotta (finished two sides or double layer for partitions).
Structural terra cotta building units with finished faces.
Concrete ashlar masonry (with finished faces).
Structural stones: Including limestone, granite, etc. with finished faces.
Rigid wallboards (cement-asbestos, etc.) prefinished or natural, applied on special light steel partition frames.
Plywoods, veneer or metal faced.
Structural glass masonry.
Structural acoustical stones and tiles.

2. APPLICABLE DIRECT TO WOOD FRAME OR FURRING STRIPS

Wood paneling, solid or plywood (preferably backed by plaster, metal, or wallboard as firestop).
Composition paneling: Asbestos-cement and other pressed, moulded and formed sheet paneling (if fireproof, requires no backing).
Fabric panels: Decorative fabrics, usually on stretchers fastened to furring strips or nailing strips. Must be backed by plaster or wallboard firestop.
Insulating boards (natural or decorated).
Decorative wallboards: Including veneered, pressed and otherwise self-finished wallboards, plywoods, and synthetic wall panels.
Decorative compositions: Including synthetic nailable compositions (resembling stone), corkboards, acoustical compositions of nailable type.
Sheet glass: Including mirrors held with metal pins or fasteners.

3. APPLICABLE ON STEEL OR MASONRY STRUCTURAL FRAMES AND WALLS (without furring strips)

Brick: Common, face, enameled, porcelain glazed or salt glazed.
Architectural terra cotta.
Concrete ashlar masonry.
Cement or composition blocks.
Rigid acoustical tiles and stones: Usually masonry type.
Opaque structural glass.

4. APPLICABLE TO CEMENT PLASTER OR MASONRY (without furring strips)

Ceramic tiles.
Enameled metal and synthetic hard compositions in tile forms.
Quarried stones: Such as caen stone, travertine, limestone, marble, granite, slate.
Architectural terra cotta (facing or veneer units).
Enameled and porcelain glazed veneering brick.
Synthetic or artificial stones.
Vitrified compositions: Including opaque glass and vitrified artificial stone.
Opaque structural glass.
Plastic paints and finishing plasters (direct on masonry).
Rigid acoustical tiles and stones.

5. APPLICABLE TO LIME OR GYPSUM PLASTER

Paints, varnishes and lacquers.
Plastic paints.
Wallpapers.
Wall fabrics.
Wall compositions: Rubber, cork, linoleum.
Leathers: Genuine and artificial.
Metal foils.

6. APPLICABLE ON WALLBOARDS, INSULATING BOARDS, ETC., WITHOUT PLASTER (joints filled)

Plastic paints.
Wallpapers.
Wall fabrics.
Wall compositions: Rubber, cork compositions, linoleum.
Enameled metal tile (on special wallboards).
Wood blocks.
Leather: Genuine and artificial.
Phenolic (hard fibre) wall panels.
Metal foils.
Paints, varnishes and lacquers.
Wallpapers.
Paints (direct where joints are battened, and over lining fabrics where joints are filled).

WALL FINISHES HAVING RELATED APPEARANCE CHARACTERISTICS

NOTHING so far has been said regarding the selection of wall finishes according to the architectural style of the intended decorative treatment. This subject is too familiar to all practicing architects to warrant treatment here.

However, when a definite design effect has been determined upon the architect can today find a multiplicity of materials which may be employed to achieve the desired architectural or decorative character. In Table II wall finishes are classified according to the character of their finished appearance. Reference to this table and to the preceding text will assist the architect in selecting materials of various types, qualities and costs which, nevertheless, are of related appearance when installed.

UTILITARIAN CONSIDERATIONS

THE selection of wall finishes is governed by certain utilitarian considerations in addition to the appearance or style factor. The principal matters to keep in mind are the following:

PERMANENCE AND DURABILITY . . . In most building projects where there is not a frequent change of occupancy the first practical consideration is to secure the most durable and permanent decorative finish that can be secured within budget limitations. This involves

TABLE II . . . TYPES OF WALL FINISHES

According to Character of Finished Appearance

1. WOOD CHARACTER

Solid wood paneling.
Solid wood planking.
Solid wood blocks.
Plywood paneling.
Composition paneling: Synthetic compositions of asbestos-cement and other products in wood stained and often carved wood effects.
Wood veneer wall fabrics (genuine veneers on a flexible fabric base).
Wood veneer wallboards (genuine wood veneers on rigid wallboards).
Wood reproductions on wallpaper.
Wood reproductions on wallboards: Including rigid, fibrous and hard plaster boards and phenolic sheet paneling.
Wood color and graining on resilient wall compositions, such as cork composition and linoleum base materials.
Wood effects produced in special plastic paints.
Painted wood paneling effects produced in plaster with wood or composition applied mouldings.
Paint—grained to resemble wood.

2. STONE AND MARBLE CHARACTER

Genuine quarried stones and marbles: Including caen stone, travertine, limestone, marble, granite, slate.
Synthetic (or artificial) stones and marbles, including cast stone.
Concrete ashlar masonry.
Vitrified stones or opaque structural glass.
Architectural terra cotta in stone character.
Enameled and porcelain glazed brick units in stone effects.
Compositions of stone character (usually of magnesite or cement base with wood fibre producing stone-like appearance).
Marble and other stone colorings in wallpaper and wall fabrics.
Marble and other stone colorings on rigid wallboards or phenolic wall panels.
Marble or decorative stone colors on structural slate.
Marble colorings in rubber tile, cork compositions and linoleums.
Plastic paints in stone colors and textures.
Interior stucco or plaster finished in stone colors and textures.
Paint, marbleized.
Acoustic stones.

3. TILE AND MOSAIC CHARACTER

Acoustic tiles.
Ceramic tiles and mosaics.
Cut stone (genuine or artificial) in tile sizes.
Architectural terra cotta in tile or mosaic patterns and colorings.
Porcelain glazed or enameled brick.
Structural glass.
Opaque structural glass or vitreous stone in tile sizes or patterns.
Porcelain enameled metal tiles.
Baked enamel metal tiles.
Asbestos-cement and other hard composition sheets in tile patterns.
Wallboards embossed in tile patterns.
Compositions in tile sizes: Cement, magnesite terrazzo, etc.
Linoleum or rubber in tile forms: Linoleum or rubber in sheet form with inlaid or embossed tile patterns.
Glazed and washable wallpapers and coated fabrics in tile or mosaic patterns.
Gypsum plaster or Keene's cement marked in tile patterns.

4. PLASTER CHARACTER

Lime, gypsum or patent plasters and interior stuccos in smooth, sanded or textured surfaces.
Precast plaster mouldings and ornaments applied to textured plaster or plastic painted walls.
Plastic paints.
Wallpapers and wall fabrics in textured plaster effects.
Acoustic plasters.

5. METALLIC CHARACTER

Sheet metals, such as copper, aluminum, monel metal, stainless steel, etc. applied with adhesives or metal fasteners, or veneered in thin sheets to composition wallboards or plywood base. Also in strip and moulding forms.
Metal foils (gold, silver and alumimum leaf, etc.) applied in place.
Metal surfaced or metal printed wallpapers and fabrics.
Metallic paints and lacquers.
Phenolic base panels and other hard wall compositions in metal colors or finishes.
Architectural terra cotta in metallic finishes.
Acoustical tiles and stones with metallic finishes.

6. PAINTED CHARACTER

Paints, enamels, lacquers, glazes, waxes, on appropriate bases.
Wallpapers and coated fabrics in solid or blended colors.
Phenolic and other self-finished wallboards and panels in solid or blended colors.

7. PAPERED EFFECTS

Wallpapers engraved or printed in patterned or scenic effects.
Wall fabrics in patterned or scenic designs.
Wallboards with stenciled or printed patterns.
Phenolic base sheets or panels in patterned designs.
Paint with stenciled patterns, or mural paintings.

8. FABRIC CHARACTER

Wall fabrics hung or stretched on panels, including silks, damasks, velvets, etc.
Wall fabrics (pasted to wall), including grass cloths, burlaps, linens and many treated fabrics reproducing silk, damask and other fabric designs, textures and finishes.
Wallpapers in fabric effects.

9. LEATHER CHARACTER

Genuine leather.
Artificial leathers and leather-finished fabrics.
Embossed or printed wallpapers and fabrics in leather textures and colors.

10. NON-CONVENTIONAL MISCELLANEOUS EFFECTS

Architectural terra cotta in non-imitative textures and colors.
Cork: Tile or panels of compressed or ground cork left unfinished.
Glass: Mirrors, sheet glass in structural thicknesses, glass tiles and opaque glass.
Laminated and moulded phenolic base sheets and panels in solid colors.
Linoleum or cork composition wall coverings in colors and designs not imitative of conventional products.
Rigid cement-asbestos wallboards or panels, natural colors.
Insulating boards with edges beveled or joints battened, in natural colors or decorated.

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balancing initial cost against normal life, cost of replacement and the intervening costs of maintenance.

EASE OF REPLACEMENT . . . In buildings subject to periodic changes of occupancy, such as rented space in office and apartment buildings and in rented dwellings, durability and permanence may be of limited value. Decorative treatments that will have a useful life only slightly in excess of the normal period of occupancy by a single tenant may be more desirable from an economic point of view than superior materials, the useful life of which cannot be fully realized. Similarly, where style changes become a factor as in many private homes and in hotels, department stores and shops, a material that can be inexpensively renewed in different colors or designs may possess distinct advantages over less adaptable materials, regardless of their cost.

CLEANING AND MAINTENANCE . . . Except where the life of a wall finishing material is expected to be very short, consideration should be given to ease of cleaning and maintenance. The cost of cleaning and maintaining certain low grade and inexpensive marbles, for example, may very soon offset their initial price advantage as compared with more expensive marbles that are less subject to staining or abrasion.

SANITARY QUALITIES . . . In hospitals and institutions and in many areas in homes, apartment buildings, hotels and other structures, wall surfaces may be required to possess sanitary qualities beyond normal ease of cleaning. Such surfaces must be free from pores or textures in which dirt will readily collect and usually must be cleanable with disinfecting liquids.

LIGHTING CHARACTERISTICS . . . The color and texture of wall finishing materials have a marked effect upon lighting. The effect of reflection factor upon the resultant illumination is very great indeed. If all surfaces of a room were black with no reflecting power the illumination on any surface would be only that received direct from the lamp. If all surfaces had a reflecting power of 50%, the illumination would be practically doubled; if the reflection factor of surroundings was in the order of 90% the illumination would be increased nearly ten times. A flat white paint may reflect as high as 82% of the light, and dark walnut wood as little as 7%. Some paints depreciate very much more rapidly than others.

From an illumination standpoint, ceilings should always be very light in color. Side walls should be slightly darker and of a neutral tint. A light colored room is much more cheerful than one with a dark finish. Glossy surfaces should be avoided as far as possible for they show reflections of the light sources.

ACOUSTICAL CHARACTERISTICS . . . The sound-absorbing or acoustical properties of wall finishing materials vary over a wide range. They may become important factors in the selection of materials for certain types of space. The decorative aspects of materials primarily employed for acoustical treatments so definitely influence their selection that they must be considered also as wall finishing materials in this study. Their acoustical properties will be discussed in a future issue.

INSULATING CHARACTERISTICS . . . The insulating characteristics of wall construction and finishing materials is a matter of growing importance. There is a definite tendency toward employing materials that in addition to their structural or decorative qualities have appreciable heat insulating values. The insulating value of construction and finishing materials will be discussed in a future issue.

FIRE RESISTANCE . . . Building codes and local ordinances may restrict the use of combustible wall finishes in certain classes of fireproof and semi-fireproof buildings. This restriction applies chiefly to the use of wood paneling and planking in fully fireproof structures and to the use of combustible materials that may be employed for sound absorption.

PAINTS, VARNISHES AND LACQUERS

ONLY secondary consideration has been given to the decorative applications of paints, varnishes, lacquers and stains. The decorative value of these materials is thoroughly understood by all architects. In a future issue, however, the technical considerations involved in their selection and employment will be given adequate treatment.

ECONOMIC AND TRADE FACTORS

THE cost of a given wall treatment can seldom be accurately determined by the retail cost of the finishing material itself. As already noted, the installed cost of a given material may be influenced by the character of the building construction and the character of the intermediate base material, as well as by such obvious matters as the cost of the product itself and its installation.

Installation cost is definitely influenced by the trade employed to apply the material. Trade allocations have been very clearly established for the conventional and well-established staple products. In the case of some of the newer materials, trade allocations have not become uniform throughout the country. In certain sections, for instance, linoleum and cork composition wall coverings may be applied by paperhangers, while in other sections they are applied by linoleum layers. Similarly, wallboards or panels marked in tile patterns may usually be installed by carpenters (which is true also of certain porcelain enameled metal tiles mounted on special wallboards), while individual composition tiles may be allocated to tile setters, and tile patterned fabrics may be allocated to paperhangers. Under the circumstances the cost of installing some of the newer products will be affected by local trade regulations.

This analysis was prepared in consultation with authorities on each type of material

SEALEX WALL-COVERING

Note how the Sealex Walls, in one of the attractive wood-panelling patterns, harmonize with the Sealex Floor and with the entire decorative scheme of this room. Even after years of exposure to brilliant artificial or sun light, these walls will keep their original beauty and color—since the decoration goes through to the backing.

See Next Page

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SEALEX WALL-COVERING

DESCRIPTION

"THE most fascinating contribution to practical wall decoration in recent years"—this is only one of many tributes paid by architects and decorators to the beauty of Sealex Wall-Covering. The range of patterns includes the amazingly close reproductions of natural wood, the textured all-over designs in soft, pastel shades, the marbleized effects, and the striated designs in blended colors. Small wonder that this entirely new and unique material is called into use for both new construction and the renovating of older buildings.

Sealex Wall-Covering is employed most attractively as a full wall treatment. It may be applied plain or in panels with wood or metal moulding. If desired, a wainscoting application can be used with a cap moulding of the same material.

Made of a specially prepared composition of linseed oil, cork, and fine color pigments, Sealex Wall-Covering is as serviceable as it is beautiful. It is keyed to either a fabric or burlap base and can be applied to any type of wall. The burlap base (heavy weight) is ideal for walls receiving harder usage, in public buildings, stores, theatres, hospitals and banks.

All Standard Weight (fabric base) patterns are illustrated in this supplement. Heavy Weight material is obtainable in an equally wide range of patterns.

DURABILITY AND FLEXIBILITY

THE material can take more wear than it will ever actually receive. It easily withstands ordinary stresses and strains. It can be cleaned repeatedly. Where wear occurs, its surface appearance remains the same since the decoration runs completely through the material. Its natural flexibility permits it to take ordinary expansion and contraction in walls. It will not crack, split or warp. It hides small plaster cracks and staining of the old wall. A strong, lasting bond is secured when applied to any hard, dry, smooth wall.

CLEANLINESS

IT is inherently sanitary, having some germ-killing properties of its own. Properly installed, it presents a smooth, unbroken surface impervious to the entrance of dirt. Insects and vermin cannot subsist behind it. It is moisture-proof, spot-proof, and stain-proof. Surface dirt is wiped away with a damp cloth or washed off with water and a mild soap. For additional gloss, the surface may be waxed. No other maintenance is required.

SOUND-QUIETING, HEAT INSULATION

IT decreases the transmission of sounds through walls and is therefore of particular value in apartment houses, hospitals, and offices. The low heat transfer of this material gives it an insulating quality which aids in maintaining even temperatures and reducing fuel costs.

EASE OF APPLICATION

ANY trained mechanic can install Sealex Wall-Covering quickly and easily by following specifications. In applying it on old walls, there is an entire absence of dirt and muss such as is necessary with any other comparable material. The average-sized room installation can usually be completed in one day.

Continued from Preceding Page

PHYSICAL ADVANTAGES

THE structural load is lessened considerably, not only by the lighter weight of the material but also by the elimination of hundreds of pounds of cement backing. Where breaking into walls is necessary, sections of Sealex Wall-Covering can be cut out and replaced without destroying the material.

PERMANENT BEAUTY, REASONABLE COST

SEALEX Wall-Covering will not fade even after years of use on walls reflecting brilliant artificial or sun light. Generally speaking, Sealex Wall-Covering is substantially less expensive than any comparable material. Specifically, it costs about the same as a first-class decorative paint job where several coats are applied.

INSTALLATION DATA, GUARANTY BOND

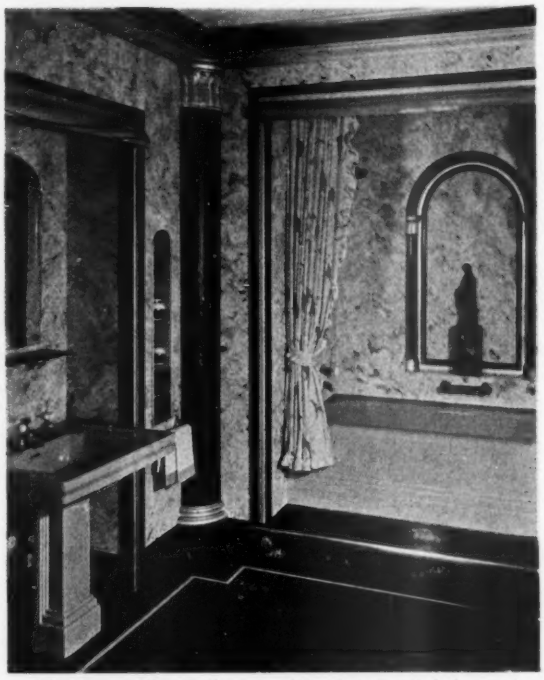
SEALEX Wall-Covering is installed by specially trained distributors, located in various parts of the country. It may be applied over practically any type of new or old wall—plaster, painted surfaces, wall-board, etc. It is hung as one would hang wall-paper, from ceiling to baseboard, and cemented in place with a paste manufactured for the purpose—Congoleum-Nairn's Green Label Paste. Ordinary wall-paper or linoleum pastes are inadequate. Where our Bonded Walls specifications are followed, we are prepared to furnish a Guaranty Bond, issued by U. S. Fidelity and Guaranty Co.

FURTHER INFORMATION

WE endeavor to cooperate with architects in every possible way. A request to our Wall-Covering Division will bring literature or a qualified representative.

CONGOLEUM-NAIRN INC.

General Office . . . Kearny, New Jersey



A luxurious, modern bathroom, achieved at pleasingly low cost by the use of Sealex Wall-Covering.

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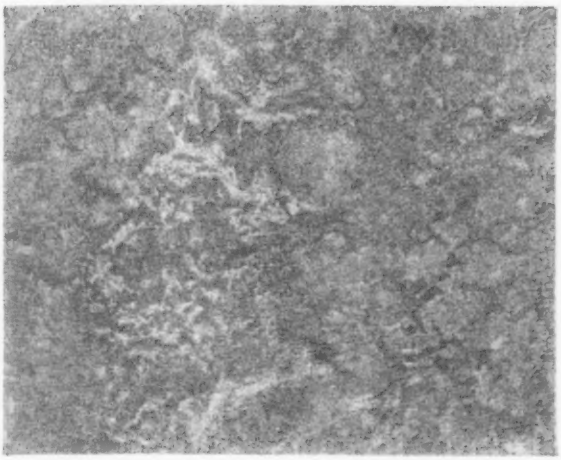
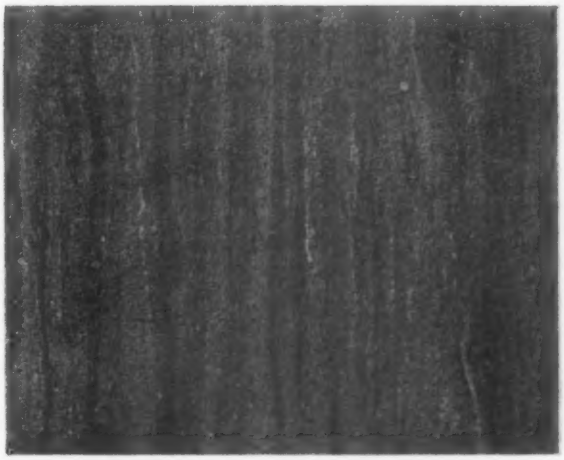
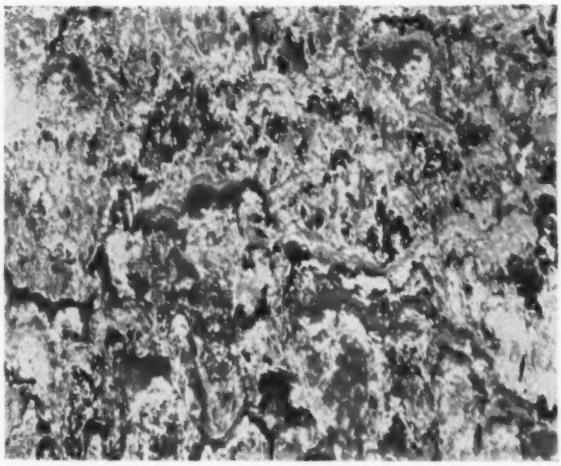
SEALEX WALL-COVERING



"Garnet"— Pattern No. 7965. These light, dainty colorings seem particularly suitable for a bedroom or sunroom. Ideal, also, for a distinctive tearoom or beauty shop.

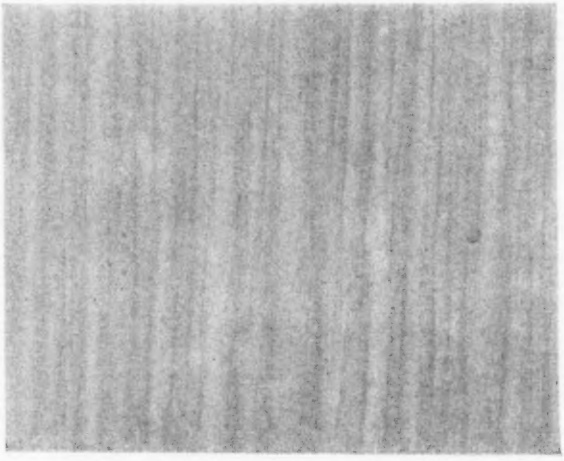


"Light Pine"— Pattern No. 7981. A wall-covering that closely resembles natural or oil-rubbed wood— this will harmonize perfectly with Early American furnishings.

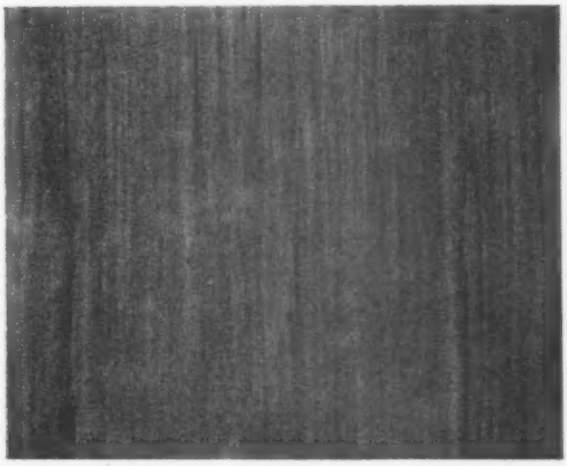


"Moss Agate"— Pattern No. 7966. Sealex Wall-Covering is ideal for remodeling all types of interiors. It is quickly and easily applied over practically any old wall.

"American Walnut"— Pattern No. 7982. With this distinctive material, the luxurious effect of fine walnut paneled walls may be achieved at relatively small cost.



"Pearl"— Pattern No. 7980. Something entirely new in wall decoration—a striated pattern in soft, blended tones of gray. A very good design for modernistic interiors.



"Jade"— Pattern No. 7983. Sealex Wall-Covering will not crack or fade. It lasts as long as the building in which it is installed and never needs decorating as most walls do.

See Next Page

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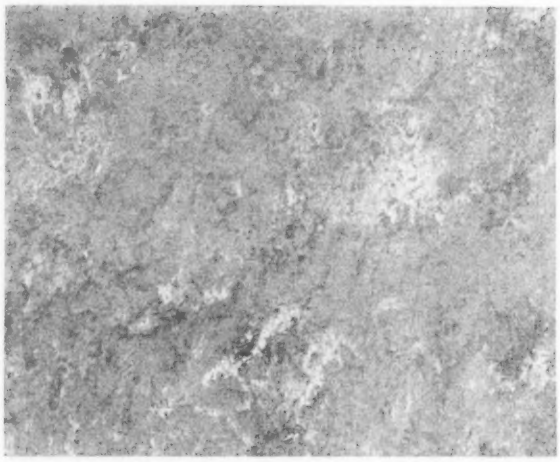
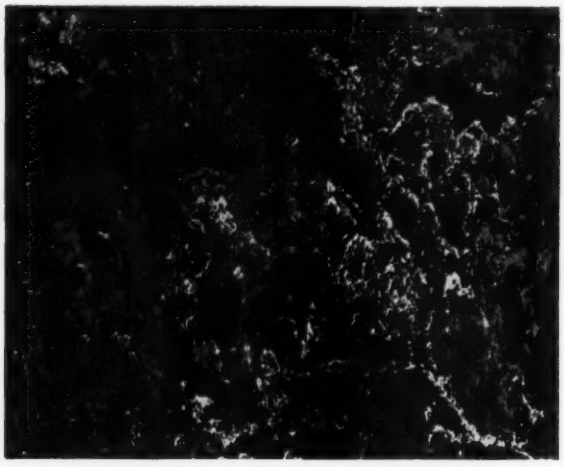
SEALEX WALL-COVERING

"Carnelian"— Pattern No. 7958. Sealex Wall-Covering may be wiped clean with a damp cloth. Thus even light-colored patterns will always look fresh and new.

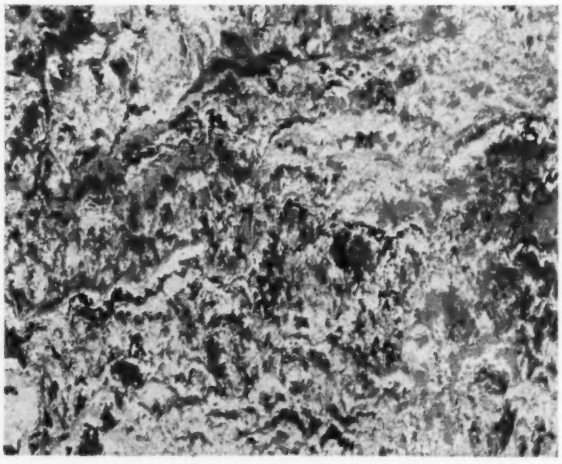


"Green Beryl"— Pattern No. 7961. Sealex Wall-Covering, Standard, is so flexible that it permits the rounding of inside corners without additional expense or trouble.



"Black Onyx"— Pattern No. 7959. Architects and decorators frequently combine two or more colors—for example, pilasters of Black Onyx against a light background.

"Turquoise"— Pattern No. 7962. Note the very delicate color blending in these pastel effects—a vast improvement over the dull, flat look of ordinary painted walls.



"Sunstone"— Pattern No. 7960. A pattern that realistically simulates the veinings and markings of rare marble —a beautiful background for costly furnishings.

"Sardonyx"— Pattern No. 7963. As Sealex Wall-Covering is spot-proof and stain-proof, these soft pastel shades may be used in any location without hesitation.

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Flexwood

PROCESS AND PRODUCT PROTECTED BY BASIC PATENTS

PLIABLE CABINET WOODS FOR WALLS

Description of the New Waterproof Flexwood:

The world's finest woods have been chosen for Flexwood. From selected logs carefully chosen for their beauty of grain and figure, thin veneers are cut. Flexed by a patented process, the veneers are not only rendered pliable but the flexing removes any tendency to warp, crack, check or shrink.

Each sheet of veneer is then mounted on waterproof fabric with a waterproof glue. Wood and fabric are practically inseparable, providing a unit that can easily be bent around angles and curves.

Flexwood may be applied on any smooth, flat or curved dry wall or other surface. It inexpensively provides beautiful walls of conventional paneling or lends itself admirably to unlimited decorative effects of modern design.

Ease of Application:

The new waterproof Flexwood is very easily applied. No priming is necessary. No lining cloth is required. Just brush on the patented waterproof cement to Flexwood and the wall, and then hang, using a broad-knife to smooth down the surface and butt edges.

By following the simple directions for applying Flexwood, any good paper hanger can achieve walls of permanent beauty. When desired, United States Plywood Co., Inc., for a nominal charge, will supervise application. All supervised work is guaranteed by the Company.

Woods and Sizes:

Flexwood is made in two types, Standard and De Luxe. Standard Flexwood is produced in 18 and 24 inch widths, 8 and 10 foot lengths, in the following woods: Walnut, Mahogany, Plain Oak, Quartered Oak, Knotty Pine, Flat Prima Vera, Ribbon Prima Vera and Lacewood. De Luxe Flexwood is made of beautifully figured veneers embracing practically the entire field of rare and exotic woods. Figure and veneer widths of De Luxe Flexwood may be selected within the limitation of the woods chosen.

Finishing:

The finishing of Flexwood should be done by a competent wood finisher. The natural beauty of the wood is best revealed by transparent varnishes and lacquers which preserve without hiding the pattern of the grain. Waxing adds charm to the dull or flat finish. Any finish used on wood, however, may also be used on Flexwood.

Inasmuch as Flexwood is natural wood, it is never difficult to secure base mouldings, wainscot panel mouldings, cornices, etc., in the same or contrasting woods to conform with the architectural period of the room.

Flexwood Creates No Fire Hazard:

Because Flexwood is applied directly on the wall with no air spaces between, it may be hung without fireproofing treatment. It is accepted for fireproof structures in the City of New York and in the most restricted zones of large cities. It creates no fire hazard.

The Wide Use of Flexwood:

The rare beauty of Flexwood is ideal for homes, offices, display rooms, elevators, hotels, theatres, stores, etc. Its economy in application, its versatility of design lends itself admirably for new construction or for remodeling interiors.

Doctor's Reception Room, Chicago, Illinois
James Hudson, Architect
Matched Walnut Flexwood Paneled Design

Since its introduction two years ago, over three million feet have been installed in leading buildings in the United States and Europe.

Permanent Architectural Exhibit

In Suite 810, at 103 Park Avenue, New York City, United States Plywood Co., Inc., maintain a permanent exhibit of Flexwood and Laminated Products. Here, as in its nine strategically located plants and offices throughout the United States, Flexwood offers to the architectural profession its complete facilities and co-operation in helping to solve any architectural problem. You are as near to this service as your telephone.

FLEXWOOD DIVISION

UNITED STATES PLYWOOD CO., INC.

103 PARK AVENUE, NEW YORK, N. Y.

OFFICES: NEW YORK . CHICAGO . BOSTON . LOS ANGELES . DETROIT . ROCHESTER . BALTIMORE . WASHINGTON . PHILADELPHIA
Also Manufacturers of PLYWOOD . FLEXMETAL . PLYCRAFT . ARMORPLY . WELDWOOD

XUM

Chicago Architects Develop Ideas

(*Continued from page* 13)

CHARGE FOR CHANGES

IN connection with changes in drawings and specifications necessary for a proposed change in work, it is recommended that when an architect advises the owner what the extra or credit will be from a contractor, that the architect simultaneously advise the owner what his own expense will be for necessary changes in or additions to the drawings and specifications, and indicate the total *net* extra or credit to the owner for making the change.

EFFICIENCY

THE architect hereafterwill be forced to give increased attention to the efficiency with which he does his work, fo rself-preservation if for no other reason. Suggestions advanced include:

Budget each job. Some approximations may have to be made, but each department should be given a limit which it must not exceed. Where a margin of profit is unusually small, an architect might be justified in actually contracting with each department to complete its portion of the work for a fixed lump sum.

Make no unnecessary details. If details are made after bids are received, any necessary changes in original conception of details may be accomplished in their first drafting at a saving in cost.

Prepare small scale drawings preliminary to working drawings. It is recommended that 1/16 inch or other small scale drawings be made outlining room subdivisions with enough detail to establish the plan in order to secure the owner's approval *before* the project is turned over to the drafting room for further development.

Furnish no free sketches.

Require increased personal efficiency, and insist upon maximum service from every man in the office.

Keep abreast of the times and thoroughly familiar with newly developed materials and methods of construction.

Be businesslike. The architect who is so esthetic in temperament that he cannot give proper attention himself, or see that someone in his office with authority does so for him, to carry on the routine of his office in a strictly orderly, prompt, businesslike fashion, simply will not be present in future architects' rosters.

The committee in charge of the investigation, under the chairmanship of E. C. Jensen, consisted of M. C. Chatten, G. W. Carr, T. J. Ferrenz, J. R. Fugard, F. B. Long, R. E. Schmidt and H. J. White, with F. Charles Starr, secretary.

Le Coq Gaulois Comes Down From Its Perch

(*Continued from page* 14)

the winding steps leading to the bell tower. Taking them three at a time, he dashed upward and passed through an opening on the highest platform before the startled sexton could catch his breath. Climbing like an ape from crocket to crocket, he finally reached the huge ball of copper which caps the masonry. This ball is about four feet in diameter, a formidable obstacle at such a dizzy altitude. It has a ridge on its upper surface, which is about eight feet above the last crocket. By a heroic and almost suicidal effort, the climber got his fingers on this ridge, and then threw up one knee. There was an agonizing moment when the man's strength seemed to desert him, but with a final burst of energy he squirmed over the ridge. Once on top of the ball the rest was easy. He performed a few gymnastics to the awestruck witnesses below, and then boldly unfastened the weathercock, strapped it on his back and crawled down to face the irate sexton. By this time all the population of Senlis was a gaping, horror-struck gallery including, unfortunately for the intrepid climber, the bailiff who promptly clapped him in jail.

For more than a century the noble bird was unmolested by such adventurers. But in 1856 an agile person named Antoine Senaut made a wager that the Prince Imperial, awaited with such impatience by the French noblesse, would be a Princesse. Senaut lost, and to pay his bet he was committed to climb the cathedral spire, straddle the weathercock and then beat a drum. The news got about and the doorway to the tower was padlocked. But Senaut was not discouraged. A few friends boosted him up to a buttress and there he began the tortuous role of human fly, a drum strapped on his back. After hours of agonizing effort he reached the weathercock and climbed upon it as though it were a lofty steed. A hush came over the breathless crowd below as the faint, far away beat of the drum became barely audible. Not content with this, Senaut attached a pennant 54 feet in length to the standard, and this flapped in the wind for years until it was disintegrated by the elements. The daughter of the reckless Senaut is still living in Senlis. She is 86, clear-eyed and vigorous and she tends her vegetable garden eight hours a day.

The weathercock returned to his perch early in May, with the silk ribbon of the tri-color around his neck. The date of his next visit to the calm streets of Senlis is most conjectural. If it is delayed as long as was his last, in 1810, our great grandchildren may be the next to gaze at close range upon his nicked and battered sides.

XUM

THERE IS NO SUBSTITUTE FOR GENUINE ENAMELED BRICK

GENUINE enameled brick in both the standard size and TUBRIC have definite places in modern construction where permanent light reflection, beauty, sanitation and imperviousness are required at the minimum of final cost.

A FEW SUGGESTIONS

SUBWAYS—platforms, tunnel linings, corridors, mezzanine wall facings, telephone booths: *New York City Subway System.*

SCHOOLS—swimming pools, gymnasia, laboratories, class rooms and wash rooms: *High School, Cayahoga Falls, Ohio.*

HOSPITALS—operating rooms, X-ray film storage, stair wells, elevator shafts, halls: *Ford Hospital, Detroit, Michigan.*

GARAGES—wall linings, offices, waiting rooms, pits, filling stations: *L. B. Garages, New York.*

FIRE HOUSES—apparatus and recreation rooms, dormitories, locker rooms: *Fire House, Hillcrest, Long Island.*

DAIRIES — refrigerators, loading platforms, bottling rooms: *Grandview Dairy, Maspeth, L. I.*

ICE CREAM PLANTS—work rooms, refrigerators, packing department, freezing rooms: *Borden's Farm Products Co., Bronx, N. Y.*

BAKING PLANTS—oven facings, mixing rooms, locker rooms, delivery department: *Cushman Baking Co., White Plains, N. Y.*

HOTELS—laundries, light courts, driveways, kitchens, storage rooms, boiler rooms, corridors: *New Waldorf Astoria Hotel, New York.*

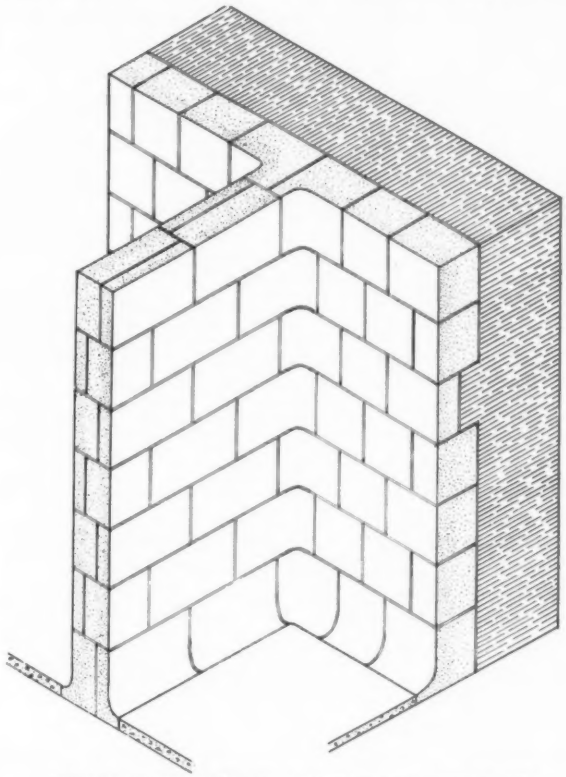
THEATRES—lobby entrances, back-stage walls, stair wells, basements, wash rooms, partition walls: *Rockefeller Center, New York.*

PUBLIC BUILDINGS, POST OFFICES, OFFICE BUILDINGS, POWER PLANTS—for interior and exterior walls, where an attractive face brick as well as a load bearing unit is required, or with brick or stone to add color decoration.

While American size genuine enameled brick is our basic product, where the trend is toward greater economy in building, the porcelain glazed finishes are furnished. Moreover, changes in architectural design incline toward units with larger face sizes than standard brick, a need that is most adequately met by TUBRIC.

Colors range in all products from white to black and in 25 vivid and pastel colors, including mottles, speckles and stipples. Necessary shapes include quoins, bullnose, cove base, necessary stops, starters, angles, mitres and others which eliminate unnecessary cutting at the job.

Our plant at South River, N. J., with a capacity of a million enameled brick per month is the largest in the country. Modern tunnel kiln firing assures uniformity in colors and sizes and permits shipments on very short notice. Rail, water or truck deliveries are available.



TUBRIC FACE TILE for 6" double-faced partition and as a part of bearing wall. Showing full size TUBRIC and the 1⅞" veneering size units, sanitary Cove at base and internal Bullnose at corners.

TUBRIC
FACE TILE

1⅞", 3" and 3⅞" Depths
8" x 4¼" Face Size

TUBRIC Face Tile, in both genuine enameled and porcelain glazed, is developed for use where very close mortar joints and accurate bonding are specified. These are ground to exact size on edges and ends and with top and bottom beds at right angles to the ends. Such accuracy in manufacture aids considerably in reducing the cost of laying.

Standard size American genuine enameled and porcelain glazed brick are 8" x 2¼" x 3⅞" and weigh about 4 lbs. each American TUBRIC, the height of two bricks but laid like one, is 8" x 4¼" x 3⅞" and weigh about 8 lbs. each. Both standard brick and TUBRIC are supplied in the "soap" or veneering depth of 1⅞".

WRITE FOR ILLUSTRATED BOOKLET

AMERICAN ENAMELED BRICK CORP.
GRAYBAR BUILDING, NEW YORK

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XUM

Archaeology Mostly American

(*Continued from page 21*)

very remote. Inspired by a misdirected zeal, the Holy Fathers gathered together all the native codices, books and documents that they could locate and burned them. Little remained; the books of Chilan Balam and three codices, the Dresden, Perez and tro-Cortesianus, all of which are in European museums, I think, complete the list.

The incendiary orgy of the good Fathers was not entirely successful in stamping out the ancient religion. There is some evidence that would tend to show that the natives in some of the most isolated villages simply translated the chief figures in their ancient hierarchy into the Roman Catholic calendar of saints and go placidly on, their religious perspective essentially that of the pre-columbian Maya. Frans Blom tells an amusing story in this connection. A Maya village, a mere half dozen palm thatched huts buried in the jungle, boasted of one tiny shrine, also palm thatched, housing a small statue of St. Anthony of Padua, the patron saint of the village. After long and unavailing prayers to St. Anthony for relief from a really serious drought, the village headmen in solemn conclave decided that the drought was entirely due to the fact that St. Anthony was lonesome! A committee of three was immediately dispatched on foot to the nearest town, some thirty kilometers away through the jungle, to buy a consort for their saint. They returned the second day bearing, in triumph, an eight inch statue of the Virgin Mary!

All that we know of the great Maya civilization of Middle America has been gleaned from the rather meager sources available, the books of Chilan Balam and the three surviving codices, the manuscript of Bishop Landa and the Maya inscriptions which have been translated, which last amounts to little more than dated monuments. All of this that we know is absorbingly interesting, but it is the pre-columbian history yet to be written that stirs the imagination. What do the small red and green handprints sometimes found under the stucco on Maya walls mean? How was all the incredibly elaborate stone carving accomplished without the aid of hard metal tools? Was the stock of our native American Indian evolved in the Americas, or was the new world populated by successive waves of migration from other lands? If by migration, to what stage of civilization had the people attained before arriving in the new world? From what country or countries did they come? All of these questions and many more are crying for answer. To some of them satisfactory answers will probably never be found, but to scores of other important questions the answers lie in the ruins of the Maya area.

It is generally conceded, I think, that it is only a matter of infinite patience and time until the Maya glyphs will be read with the same facility with which the Egyptian hieroglyphics and cuneiform are read today. When that day dawns we will have spread before us on stele and wall, on lintel and jamb, the first real American history, the long-drawn struggle of a race from agriculturalists to city dwellers; from the first potter to the fine craftsman in gold, silver, copper and jade; from the first builder of crude shrines to the architect of the Castillo at Chichen-Itza or the Temple of the Dwarf at Uxmal; from the first groveling supplicant before the image of the rain god to the priest-astronomer capable of evolving a calendar more accurate than the Christian calendar, in the days of Cortez; a history of migrations, of wars, of conquests; a history leading up through the Nahuatl invasion and extending back through the centuries to the early years of the Christian era, and perhaps many years before that. Quien sabe?

Unusual Solutions of Unusual Structural Problems

(*Continued from page 42*)

shallower girder or pair of girders than would be the case if the ordinary type of girder were used.

When an extremely heavy and relatively shallow girder connects to the web of a column, difficulty is often experienced in taking out the reaction without the use of large seats or brackets. At the left end of Fig. 3 is shown a simple way of getting around this difficulty. The column web is slit, the center web of the girder is extended through and a pair of connection angles provided.

In a large bank building it was necessary to offset certain columns in order to provide sufficient width for the lobby. Ordinarily a pair of heavy girders would have been used to carry each column but in this case the girders would either have made the lobby ceiling height too little or they would have destroyed valuable space on the floor above. To solve the problem special cantilever trusses as illustrated in Fig. 4 were used.

When a girder having a heavy reaction connects to the flange of a column, difficulty is sometimes found in making the connection strong enough to take care of both the shear and moment without using large brackets or other objectionable and cumbersome details. Fig. 5 shows a satisfactory solution of this problem. A short length of column is built onto the end of the girder in the shop, the center web of the girder running through this short column to form the column web. This web is valuable as a means of providing for both shear and moment. The field connection of the girder at this end now becomes merely an ordinary column splice.

A six-story building was nearing completion when the owner closed a lease for the first floor and the tenant objected to a certain column in the front of the building, saying that it must come out or be moved back five or six feet. An estimate was made and it was found that it would cost several thousand dollars to move the column. The owner and tenant decided that it was worth the cost and ordered the column moved. A pair of girders were placed in the second floor and also in the first floor and welded in place, then a new first story column was placed between the girders, the load put into it and the girders by jacks and the offending first-story column burnt out. See Fig. 6.

XUM

Ease of Hearing is Essential

but Beauty also must be served

Exterior and interior of the Scottish Rite Cathedral, Indianapolis, Ind., where Acousti-Celotex Sound Absorbing Tiles are applied to the ceiling to assure ease of hearing and talking. Architect: George F. Schreiber, Indianapolis

ACOUSTICS is a practical problem that architects are solving by the application of Acousti-Celotex Sound Absorbing Tiles to the ceilings of auditoriums, and all rooms where ease of talking and hearing is a first essential.

The high degree of efficiency of this widely used corrective in absorbing distracting noise, in subduing reverberations and in clarifying the spoken word, is one of the main reasons why it is so frequently specified for new buildings.

Its easy application to existing surfaces, without the necessity for alterations, makes it equally in demand for the correction of acoustics in buildings already in use.

But beyond its practical effectiveness are its decorative possibilities—its complete adaptability to design—its genuine contribution of beauty to interiors of every style.

And, finally, Acousti-Celotex Sound Absorbing Tiles offer no after-problems. There is no deterioration of material; no repairs. Their high sound absorbing efficiency, predetermined and fixed by the patented perforations is permanent. Painting and repainting will not impair it in the slightest degree.

For complete information write the Acousti-Celotex Service Bureau, 919 North Michigan Avenue, Chicago, Illinois.

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Use BLOX-ON-END flooring for factory remodeling

It's easily laid over any type of sub-floor!

SINCE 1916, millions of square feet of Bloxonend have been laid in factories, mills, warehouses, printing establishments and industrial plants of all kinds—where it is subjected to heavy trucking and other daily gruelling wear, yet today these floors remain smooth and substantial.

This original strip type block flooring is ideal for remodeling—laid over old wood or concrete floors with only slight interruption to daily operations. The small tough blocks are dovetailed onto substantial baseboards and the built-up sections are joined with heavy wood splines for a degree of smoothness and durability not equalled by any other floor. Write for descriptive literature.

Carter Bloxonend Flooring Co.

General Offices, Kansas City, Mo.

BLOX-ON-END FLOORING

Lay's Smooth Stay's Smooth

Comes in 8 ft. built-up lengths —the end grain UP

Small blocks of Yellow Pine dovetailed onto Baseboards.

Damage Suits Against Architects for Negligence

(*Continued from page 23*)

difficult for an experienced architect to read the signs and sense the development of one of these more serious situations. When he does see one of them in the offing, it is important that he should at once set about putting his house in order and making sure that the record is clear.

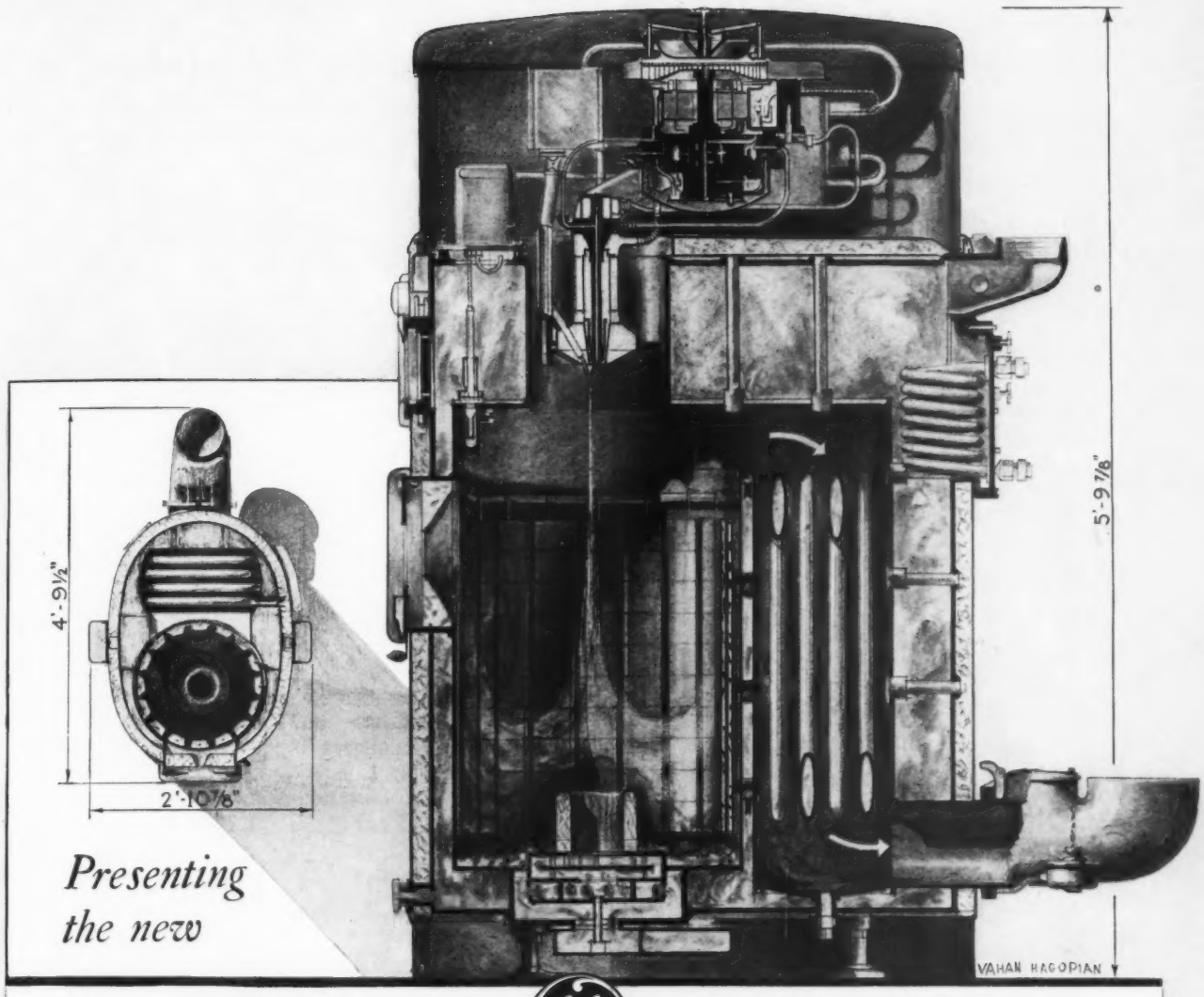
Where the client, for example, insists that certain changes be made of which the architect does not approve and from which he believes trouble may result, the architect should be careful to go on record in writing to the effect that the changes are being made at the instance of the client and on the latter's responsibility. Where the client gives indications of an attempt to build up a claim of improper supervision, the architect can quite easily and naturally make a record of his supervisory visits, not only in his office records, but in the form of letters to the client, reporting that he has on such and such days inspected the job and thus inform him of how the work is progressing. The same is true where other claims are advanced by the client. If they be serious enough, the architect will do well to take advice before he proceeds and thus be sure that he is protecting himself as best he may. It is extraordinary how a few well-considered letters, written at the right time and in the right way, will serve to demolish a claim by the client which might otherwise be dangerous and certainly troublesome and also will protect the architect from future loss and difficulty.

A word of caution is in order, however. It is probably better to write no letters than to write them carelessly or without proper advice, where advice is indicated. An ambiguous or thoughtless letter or memorandum can easily spoil what would be otherwise a perfect defense.

CERTIFICATES . . . I should add a final word with respect to the issuance of certificates. If the certificate is issued carelessly and without just cause and paid, the client will have a valid claim for damages against the architect. This would unquestionably constitute negligence. In too many cases certificates are issued more or less as a matter of course and rather casually. This is dangerous practice. The architect should in every case be in a position to prove, if necessary, that the certificate was issued after careful consideration and with the exercise of all reasonable care. To follow any other course is directly to invite trouble and litigation.

Housing Committee Meeting November 4

COINCIDENT with the National Conference on City Planning to be held in Pittsburgh in November the Committee on Economics of Site Planning and Housing of the American Institute of Architects will hold a meeting on November 14, 1932. The session will be devoted to a discussion of housing and slum clearance. The session will be open to all architects who are interested in this subject and they are cordially invited to be present. Information relative to the time and place of the meeting can be obtained by addressing the Committee Chairman, Frederick Bigger, Westinghouse Building, Pittsburgh, Pa.



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No other insulating material offers a like protection from cold, heat, fire, sound and vermin—five points of vital importance to every home owner.

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Deaths

JOHN K. STACK, architect, died August 15 at the age of 74. He had been practicing in Baltimore, Md., where he designed and built St. Mary's Star of the Sea, St. Anne's, St. Charles, St. Gregory's and St. Paul's churches.

HARRY ALLAN JACOBS, architect, died August 21 at the age of 60. He had designed the Marseilles Hotel, the Seville Hotel, the Friars Clubhouse, the Hardman-Peck Building, three houses for Otto H. Kahn and houses for Adolf Zukor and Lieutenant-Governor Herbert H. Lehman. Last year he was nominated a fellow of the American Institute of Architects and was a past president of the alumni of the American Academy in Rome. Mr. Jacobs was born in New York, graduated from the School of Mines at Columbia University, studied for five years at the Ecole des Beaux Arts, Paris, and in 1897 was awarded the Prix de Rome in architecture. Some ten years ago he suggested making Fifth Avenue a double-decked street with four sidewalks. In 1926 and 1927 he was a member of Mayor Walker's Committee on City Plan and Survey.

SEATTLE architects recently held an exhibition on the fourth floor of the Frederick & Nelson Department Store. Preliminary sketches, perspectives and plans were presented as well as working drawing and models.

THE CUTLER MAIL CHUTE

TO INSURE standard, dependable equipment installed promptly at moderate cost, the Cutler Mail Chute should be specified by name. If desired, approximate estimates will be furnished in advance.

If preferred, a stated sum may be allowed to cover this item.

Full information, details, specifications and estimates on request.

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NEW CATALOGS . . .

Readers of AMERICAN ARCHITECT may secure without cost any or all of the manufacturers' catalogs described on this and the following page by mailing the prepaid post card printed below after writing the numbers of the catalogs wanted. Distribution of catalogs to draftsmen and students is optional with the manufacturers

SUBURBAN SEWAGE DISPOSAL SYSTEMS

100 . . . Septic tanks made by the Nustone Products Corp., Stamford, Conn., are described in this folder, which also discusses the company's engineering facilities.

HOME LIGHTING THROUGH THE YEARS

101 . . . Lighting fixtures for residences are illustrated in this brochure, which also discusses the various types from the historical aspect. Issued by Sack, Incorporated, Boston.

SCULPTURED ARCHITECTURAL GLASS

102 . . . Various designs in architectural glass made by Steuben Furnaces and used in different prominent buildings are illustrated in this booklet, which gives size, weight and thickness of each design illustrated. A. I. A. file 26 a.

NEW "R-4" COLT AUTOSAN DISHWASHING MACHINE

103 . . . Folder illustrating and describing the new dishwashing machine made by Colt's Patent Fire Arms Mfg. Co., Hartford, Conn. For use where heavy and continual service is necessary.

STUDIES IN BRICKWORK

104 . . . Pictures and scale details of brickwork in the Teaneck, N. J., High School. Issued by the Metropolitan Paving Brick Co., Canton, Ohio.

HARDWARE

105 . . . Ilco Catalog No. 10, Hardware Section, Independent Lock Company, Fitchburg, Mass., gives information on cylinder locks, night latches, door closers, etc., made by this company. Indexed and illustrated.

NEW WALLPAPER PATTERNS

106 . . . Samples of the new wallpaper patterns may be secured from the Wallpaper Association of the United States, 10 East 40th Street, New York. Suggested that those requesting samples tell the type of design in which they are interested.

STURTEVANT HUMIDIFIER FOR HEALTH AND COMFORT

107 . . . Cabinet type humidifier made by B. F. Sturtevant Company, Boston, Mass., is illustrated and described in this folder, which also covers manner of operation.

GRANITE

108 . . . Designs in granite and the operation of the quarries of Grenci & Ellis, Inc., New York, are given in this booklet, also pictures of various buildings and memorials in which used.

DISTINCTIVE HOMES OF ILCO RIPLSTONE

109 . . . Pictures of houses in which limestone is used are contained in this booklet issued by the Indiana Limestone Company, Bedford, Ind. In some cases, floor plans are given. Also residential details executed in limestone.

CARPENTER STAINLESS WELDED TUBE

110 . . . Information about stainless welded tubing made by the Carpenter Steel Company, New York, is contained in this folder, which discusses physical properties, working instructions, etc.

IDEAL HEATING FOR COTTAGE OR SKYSCRAPER

111 . . . The complete line of products of the American Radiator Company, New York, is illustrated and described in this booklet, which discusses boilers, radiators, heaters for cellarless houses, etc.

AERO AUTOMATIC FIRE ALARM

112 . . . How to avoid fire losses is explained in this illustrated booklet issued by the American District Telegraph Company, New York. Discusses fire detection systems and gives diagrams showing typical arrangement of Aero devices and tubing.

NEW G. E. OIL FURNACE

113 . . . Information about the new General Electric oil furnace is contained in this illustrated booklet, which gives cost of operation and general data. Issued by the General Electric Company, Schenectady, N. Y.

USES OF PLATE METAL IN MECHANICAL EQUIPMENT

114 . . . Bulletin compiled by the Armco Sheet Metal Consulting Service in collaboration with W. H. Junker, mechanical engineer for Harry Hake, architect, discussing the mechanical plate equipment in the Cincinnati & Suburban Bell Telephone Building. Illustrated. Issued by the American Rolling Mill Company, Middletown, Ohio. A. I. A. file 34.

PLANNING FOR HOME TELEPHONE CONVENIENCES

115 . . . Data book for architects, engineers, builders and owners. Issued by the American Telephone and Telegraph Company, New York. Discusses manner of installing telephone wires, equipment, etc., in residences. Gives sketches and plans of houses to illustrate where telephones should be placed, also detail pictures of installations. Also discusses facilities for intercommunicating service.

NO POSTAGE REQUIRED ON THIS CARD

AMERICAN ARCHITECT October, 1932
New York City

Please have the following catalogs reviewed in this issue sent to me.

Numbers .....

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• I also desire further information about the new products described in this month's "New Materials and Equipment." . . (See pages immediately following this insert)

Numbers .....

• I would like to have catalogs and information concerning the following products advertised in this issue. (Write page number or name).....

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XUM

These NEW Catalogs may be obtained through AMERICAN ARCHITECT

Gives specifications, construction details to meet various conditions, etc. A. I. A. file 31 i 5.

Cabot's Clear Brick and Clear Cement Waterproofing

116 . . . Discussion of waterproofing various masonry materials with products made by Samuel Cabot, Boston. Gives pictures of various types of buildings on which used, also specifications. A. I. A. file 7 b.

Cold Magic

117 . . . The progress of refrigeration during the past 5 years, its value to commerce and industry, its relation to our everyday lives and the part played by the York Ice Machinery Corp., York, Pa., are contained in this booklet. Illustrated by art photos of equipment.

Hauserman Movable Steel Partitions

118 . . . Various types of movable steel partitions made by the E. F. Hauserman Co., Cleveland, are illustrated and described in this booklet. Gives details of construction and pictures of typical installations. A. I. A. file 28 a 3.

Kelsey-Bradley Conditionaire

119 . . . Equipment that heats, humidifies, purifies and ventilates is illustrated and described in this booklet issued by the Kelsey Heating Co., Syracuse. Gives various technical data.

An Eectric System of Temperature Control

120 . . . Automatic temperature control in buildings is discussed in bulletin B2 of the Barber-Colman Company, Rockford, Ill. Explains how electricity is used for temperature control, gives typical applications, and discusses equipment necessary. A. I. A. file 30 f 2.

Hot Water For Commercial Purposes

121 . . . What is declared to be a revolutionary principle of oil-burning is illustrated and described in this folder issued by the Motor Wheel Corp., Lansing, Mich. Discusses its use in connection with the production of an unlimited hot water supply for large users. A. I. A. file 29 d 2.

Announcing Model "T" Kernerator

122 . . . An incinerator especially designed for small homes is described and illustrated in this folder issued by the Kerner Incinerator Company, Milwaukee, Wis. Detail drawings showing manner of installation. A. I. A. file 35 j 41.

Better Heating

123 . . . Buffalo unit heaters, made by the Buffalo Forge Company, Buffalo, N. Y., are illustrated and described in this booklet. A. I. A. file 30 d 11.

Announcing Crittall Casements Installed in Redwood Surrounds

124 . . . Illustrates and describes the new redwood surrounds for casements made by the Crittall Casement Window Co., Detroit, Mich. Gives detail drawings showing construction when used.

Sirocco Unit System For Cooling and Heating

125 . . . These systems for offices, stores, restaurants, shops, etc., are illustrated and described in this booklet issued by the American Blower Co., Pittsburg, Gives pictures of typical installations and detail drawings.

The Air You Breathe

126 . . . Facts about air and the American Airgard are given in this illustrated booklet issued by the Airgard Ventilator Corp., New York. This device permits windows to be kept shut so that street noise is minimized.

Facts About Douglas Fir Plywood

127 . . . Facts about Douglas Fir Plywood, it uses, manufacture and sizes, are contained in this booklet issued by the Douglas Fir Plywood Manufacturers, Seattle, Wash. Gives test data and suggestions for finishing.

Radio Convenience Outlets

128 . . . Information about radio convenience outlets made by the Yaxley Manufacturing Co., Indianapolis, Ind., is contained in this booklet. Gives diagrams of radio wiring for residences and apartments. A. I. A. 31 i 62.

Air Filters

129 . . . The Coppus Annis Air Filters for ventilating systems are illustrated and described in this booklet. Tells how to determine the number of unit filters required, method of installing, reference tables and other technical data. Issued by the Coppus Engineering Corp., Worcester, Mass.

Modernizing the Hot Water Heated Home

130 . . . Sav-T-heat and air conditioning for use with hot water heating is illustrated and described in this booklet issued by the C. A. Dunham Company, Chicago. Explains use in modernizing work.

Trane Room Coolers

131 . . . Various types of cooling units and combination heating and cooling units made by the Trane Company, La Crosse, Wis., are illustrated and described in this booklet. Gives diagrams and pictures of typical installations.

Venetian Blinds for All Windows

132 . . . Houses, schools, public buildings, churches, hospitals and many other types of structures find venetian blinds essential as part of their window equipment. The catalog of the Burlington Venetian Blind Co., Burlington, Vt. illustrates numerous buildings using this equipment and contains data on colors and construction details of venetian blinds made by this company.

Aluminum Windows

133 . . . Folder gives full details of heavy and medium sections and typical installation details. Issued by Crittall Casement Window Co., Detroit, Mich.

Textured Tapered Asbestos Shingles

134 . . . Catalog illustrates and describes "Eternite Timbertex," tapered asbestos shingles textured like wood, made by the Ruberoid Company, New York.

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XUM

NEW MATERIALS & EQUIPMENT

BRIEF REVIEWS THAT MAKE IT EASY TO KEEP IN TOUCH WITH THE PROGRESS MADE BY PRODUCERS

Improved Enameling Iron

120 An improved enameling iron to be known as "Crystal Etched," possessing exceptional bonding qualities, has been placed on the market by the American Rolling Mill Company, Middletown, Ohio. It is said to have greater resistance to chipping and flaking, there being greater adhesion between metal and enamel.

Residence Steel Boiler for Oil Burning

121 Automatic combustion control with the built-in Combustrol and instant hot water supply are the features of the new boiler, designed specifically for oil burning, now being marketed for residence use by the Fitzgibbons Boiler Company, New York. It is called the Fitzgibbons Oil-Eighty Automatic.

New Home-Size Petro Oil Burner

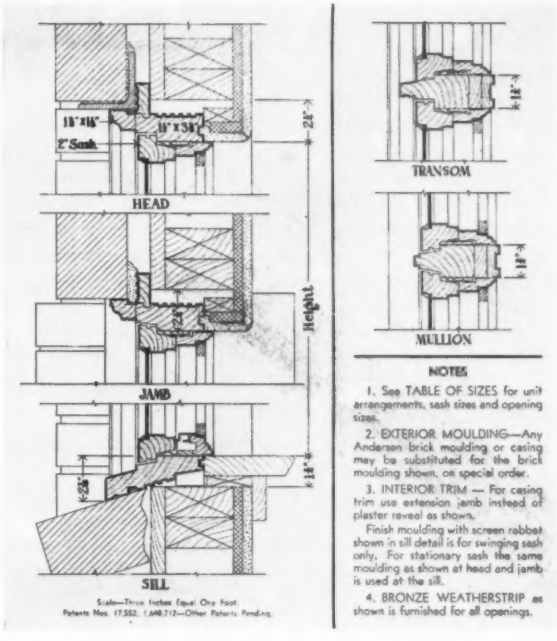
122 The Petroleum Heat and Power Company, Stamford, Conn., has introduced a new oil burner utilizing the same principle of design as in the Petro oil burners in large industrial plants and office buildings. This burner is especially intended for residences and to secure exceptionally economical fuel consumption.

New Celotex Sanitary Processed

123 A process by which fungus growth and termite damage may be prevented is now used in the manufacture of all Celotex cane fibre products made by the Celotex Company, Chicago. It is called the Ferox process and is a method whereby the individual fibers, in their wet state and before formation into a board, are coated with a chemical complex which is toxic to fungi, termites and other cellulose destroying organisms. The process is declared to be insoluble in water, non-volatile, odorless, permanent and not to alter the physical properties of the finished products. It is also said to present no hazards to humans or domestic animals.

New Type Sealex Wall Covering

124 A new type of Sealex Wall Covering has been introduced by Congoleum-Nairn, Inc., Newark, N. J. It is called "standard" and has a light fabric backing instead of the burlap backing. It is especially adaptable for residential work and for fine offices. The material is declared to be permanent, non-fading, stainproof and moisture-proof, and to act as a heat and sound insulator. It is furnished 36" wide and comes in 22 patterns. Where a paneled design is desirable, the material may be used with wood or metal mouldings.


HEAD
JAMB
SILL
Height
TRANSOM
MULLION
NOTES
1. See TABLE OF SIZES for unit arrangements, sash sizes and opening sizes.
2. EXTERIOR MOULDING—Any Andersen brick moulding or casing may be substituted for the brick moulding shown, on special order.
3. INTERIOR TRIM — For casing trim use extension jamb instead of plaster reveal as shown.
Finish moulding with screen rabbet shown in sill detail is for swinging sash only. For stationary sash the same moulding as shown at head and jamb is used at the sill.
4. BRONZE WEATHERSTRIP as shown is furnished for all openings.

New Anderson Casement Completely Fitted

125 The Anderson Frame Corporation, Bayport, Minn., has placed on the market a new casement which includes, in addition to the frame and sash, weatherstrips, complete hardware, screen and removable double glazing. The stiles and rails of the sash are made of clear pine primed with aluminum paint; muntin bars are of solid aluminum. Improved reinforced joints eliminate exposed end wood. Wood members have greater thickness than width, which increases strength yet maintains narrow lines. Extension hinges permit easy cleaning of outside glass from the inside. Made in single and multiple units.

New Hospital Plumbing Fixtures

126 A new line of hospital plumbing fixtures has been announced by the Kohler Company, Kohler, Wis., and is stated to be complete in every respect. Over-rim supply, a feature of most of the fixtures, eliminates the danger of cross-connection and possible contamination of the regular water supply. All the flush valves are furnished with syphon preventers and as an added precaution vacuum breakers are available for supply lines and flush valves.

To Get More Information, Use Post Card on "Catalog Insert" Preceding

XUM

Rare Woods Reproduced in New Material

127 A new material that reproduces rare woods in their actual color and texture has been placed on the market by the De Vos Company, Inc., Long Island City, N. Y. The material is called "Horneer Panels" and is shipped ready for application by the paperhanger.

Fire-Retarding Paint

128 A paint that has been used in the railroad field for some years has been introduced into the building industry by the Lundy Corporation, New York. It is called BurNot Fire-Retarding Paint and is declared to protect wood surfaces from fire because extreme heat melts down certain of its mineral constituents to form an enamel glaze which cuts off the air supply and prevents combustion. It is declared to be highly weather-resisting and to protect against decay. It comes in various colors and is adaptable to both exterior and interior work, either gloss or flat finish. May be applied by either brush or spray and the coverage is approximately that of any high grade linseed oil paint.

General Electric Announces Humifilter

129 A device which will circulate, filter and properly humidify air in a home without the use of a duct system, using electric power at the same rate as a single incandescent lamp, has been announced by the General Electric Company, Schenectady, N. Y. The device is capable of producing a complete change of air in the lower part of a house in 40 minutes. It is called the "humifilter," and has an evaporating capacity which will supply an adequate amount of moisture to homes with a volume not exceeding 50,000 cubic feet.

Wall Covering Developed by Armstrong Cork Co.

130 A wall covering and wainscoting possessing the sanitary qualities and durability found in linoleum has been announced by the Armstrong Cork Company, Lancaster, Pa. It is called "Linowall" and will be offered in designs and colorings specially suited to wall use. The new line is made up of two types of material—one, a linoleum mix keyed to a fabric back; the other, a special embossed lacquered material which simulates glazed tile, being intended to meet the public demand for a reasonably priced wall material which closely approximates the hard glazed surface of ceramic tile. Necessary accessories are also included in the line, including wood cap moulding, metal cap strips, etc.

New Type Table and Counter Top Construction

131 The Vitrolite Company, Chicago, has announced a new type of table top and counter top construction. In this construction, the corners of the Vitrolite are rounded and the Vitrolite affixed with plastic cement to an underslab of Presdwood and bound around with a metal moulding. The metal moulding is connected from opposite sides with metal bands to stiffen the construction. On counter tops the joints in the moulding are covered with metal clips. Advantages claimed are that the tops are protected against chipping, danger of breakage is practically eliminated, and sound is deadened by the cement and Presdwood.

Fireproof Insulating Board

132 The United States Gypsum Company, Chicago, has developed an insulating board called "Insulating Sheetrock" and making use of a new principle. The product consists of a $\frac{3}{8}$" thick gypsum board with one surface having the same finish as ordinary Sheetrock, and is applied to studs and joists in much the same manner. But the reverse side or side placed next to the studs has a shiny metal surface. It is declared that about 75% of heat-travel across the space between inside and outside of studs is by means of radiation, which the new shiny metal surface stops.

Low-Cost Photoelectric Relay

133 A new low-cost photoelectric relay has been announced by the G-M Laboratories, Inc., Chicago. It is called the Foto-Switch and embodies an electromagnetic switch which is opened or closed by the interruption or variation in the illumination on the photoelectric cell. With the device, any sort of electrical device may be controlled through the medium of the light beam. The Foto-Switch is also suitable for automatically turning on and off artificial lights when the daylight drops below or rises above a pre-determined level. The system may be provided with an invisible infra red light beam.

New Process of Freezing

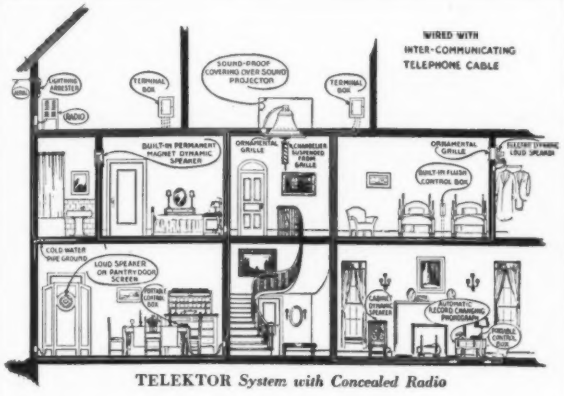
134 The "Z" process of freezing, which is in commercial operation in England, Norway, France, Italy and Australia, has been introduced into this country by the American Z Corporation, New York. The Frick Company, Waynesboro, Pa., has made arrangements to produce all apparatus and equipment used in connection with the Z process in this part of the world. This process, in order to effect rapid cooling without the necessity for maintaining extremely low temperatures, employs at one and the same time all three of the known methods of heat transfer—radiation, conduction and convection.

Safety Boiler Control

135 A safety boiler control, or low water cut-out, which contains a precision fuse that melts at a definite temperature in a definite time, has been placed on the market by the Petroleum Heat and Power Company, Stamford, Conn. This fuse is in the electric circuit operating the burner, shutting it down when excessive temperature or pressure causes the fuse to melt and break the circuit. It is called the Kelley safety boiler control and is suitable for the protection of high or low pressure steam or water boilers fired with gas or oil burners or mechanical stokers.

Masonite Cushioned Flooring

136 An all wood fibre floor covering declared to be both resilient and impervious to moisture has been placed on the market by the Masonite Company, Chicago. This flooring is made possible by the recent development of tempered Presdwood, which forms the outer surfaces of the three-ply laminated flooring block in which the inner section is a resilient wood fibre material called QuartRboard. The result of the combination is a block with outer surfaces of the hard smooth tempered board and with the resilient inner layer acting as an in-built shock absorber. Laid in mastic cement over concrete or wood subfloor.



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(TO CHOOSE FROM A DISTANCE)

High quality reproduction of radio and phonograph programs is made available throughout the residence with TELEKTOR control of the distant instruments. Outlet plates available for standard one to four-gang switch boxes. Write for the new TELEKTOR Booklet describing the acoustic effects and convenience a Telektor System makes available.

CONTROL BOX

Stromberg-Carlson Telephone Mfg. Co.,
Rochester, N. Y.

Stromberg-Carlson

These kitchen sinks are **BEAUTIFUL** *...and they're* **PRACTICAL,** *too*

8 POINTS OF DISTINCTION JUSTIFY YOUR SPECIFICATION OF MONEL METAL KITCHEN SINKS

1. Rich, lustrous beauty...with a satiny, glass-smooth surface.
2. Neutral silver tone that harmonizes with any kitchen color scheme.
3. Rust-proof...highly resistant to corrosion...easy to clean.
4. Solid metal...no coating to chip, crack or wear off...strong as steel.
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6. 31% more work space than ordinary sinks of same nominal sizes.
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NICKEL ALLOYS LOOK BETTER LONGER

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They LOOK the same

BUT— one shirt has the built-in quality that will enable it to outlast the other by a good many washes.

Quality—performance—is the final gauge of value in cold storage doors, just as it is in shirts. Jamison and Stevenson Doors have the built-in qualities that have led to their remarkable record of performance.

Don't judge by looks alone—get the facts. We can supply them.

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Oldest and Largest Makers of Cold Storage Doors
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Jamison & Stevenson Cold Storage Doors

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"ROCKEFELLER CENTER" *selects* Kliegl *lighting specialties*

THE MERITS of Kliegl products and craftsmanship won the hearty approval of executives responsible for the erection and operation of the world's greatest theatres now under construction in Rockefeller Center, New York—and both playhouses will be fully equipped with the very latest improvements in Kliegl stage lighting equipment and apparatus, including many new lighting devices never before used:

Footlights	Spotlights	Program Lights	Stage Pockets
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KLIEGL BROS
UNIVERSAL ELECTRIC STAGE LIGHTING CO., INC.
321 WEST 50th STREET
NEW YORK, N.Y.

What Architects Are Talking About

(*Continued from page 27*)

JAMES MONROE HEWLETT, who sailed September 20 to assume the duties of resident director of the American Academy in Rome, expresses the hope that during his regime he may "offset the rather unfortunate tendency in all the arts, along with the modern movement, to scorn the things of the past." He stated: "We've made more progress in architectural education during the last forty years than any other country in the world, and yet we absurdly go abroad to copy some modern fad for our interiors. Modernistic art is barren of originality and thought. And yet even in our most commercialized and practical buildings we find a distinct need for freshness, originality and beauty."

A further thought expressed by Mr. Hewlett was that: "Our greatest need in the arts of design in this country today is to educate a generation of painters, sculptors, architects, and landscape men who regard their art as something intimately connected with the other arts. For the last 500 years there has been a tendency for artists to paint and sculptors to sculp, whereas in Egypt, Assyria, Greece and Rome, and even in the nations of the Middle Ages, you find the artists working together and that is inherent in design. Rome can impress upon the mind of the able sculptor or architect the vital dependence of his own art upon other arts.

"That is particularly necessary if modern art is to last. We've got to have sculptural forms that are not based on copies and the only way we can do it is to get all artists working together."

EXHIBITIONS are being booked in the art galleries of Sears, Roebuck and Company, 1106 Connecticut Avenue, Washington, D. C. Artists who desire to exhibit are requested to communicate with Theo. J. Morgan, director. There are no charges for use of the Galleries, hanging of works, etc., nor commission on sales.

THE American Water Color Society will hold its sixty-sixth annual exhibition October 27 to November 13 at the Fine Arts Society, 215 West 57th Street, New York. Exhibits will be received on Wednesday, October 19, only, between 9 a.m. and 5 p.m., at 210 West 58th Street, New York.

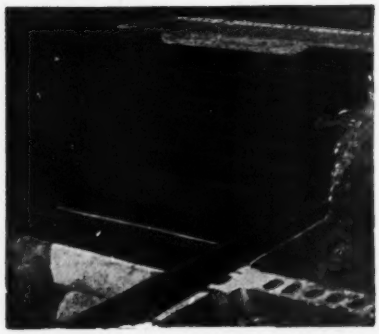
RIVET heads may now be protected from corrosion, according to the American Zinc Institute, Inc., New York. The individual units of riveted steel structures may be hot-dip galvanized before assembling, joined together by riveting in the usual manner with ordinary uncoated rivets, and the exposed rivet heads then sealed from the weather after the entire job is assembled in the field.

THE world's largest chandelier will be installed in one of the theatres in Radio City. It was designed and is being built by Foster Gunnison, lighting engineer, and will provide enough illumination to allow 4,000 people to read their newspapers. By it, the theatre may be illuminated with any intensity of red, blue, green or amber.

AN International Institute of Steel Construction has been organized. It is proposed that executive offices shall be established in The Hague under the direction of E. A. Van Genderen Stort.

DRINKING fountains that flow only when a person's head is bent to drink are a recent development of the photoelectric cell. In the main office building of the General Electric Company, Schenectady, N. Y., is a drinking fountain operated by "black light," so that the beam of light usually associated with the photoelectric cell is not visible.

A FRAMELESS steel house is now nearing completion in Solon, a suburb of Cleveland, Ohio. It is being constructed by the Insulated Steel Company in cooperation with the American Rolling Mill Company. As the weight of the structure is carried by the walls, the erection of the conventional structural frame is unnecessary. A large part of the frameless steel house is factory produced. There is no field cutting nor fitting. The walls are made of steel sheets in which channels are pressed to give rigidity; after forming, wall sheets come in four different widths, further adjustment being secured by telescoping the channels. The walls are assembled in sections room wide and story high with win-



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dow or door frames in place, the various pieces being welded in place. The completed wall weighs slightly more than 2 lbs. per square foot. Floor sheets are formed longitudinally in the shape of a long "Z" and lapped one over the other and welded together, forming a series of metal boxes. One welding outfit and two workmen were employed in the erection work, 17 tons of steel being required to form the "chassis" of the house which contains seven rooms, two baths and a double garage, with recreation room, boiler room, laundry and other storage rooms in basement; approximate size not including garage, 39'x28'. The exterior is insulated and covered with porcelain enameled shingles. Completed wall is less than 4" thick. Ceiling will be finished with an acoustical tile cemented to the lower plane of the steel floor above. A four ply asphaltic roof will be applied over an insulating slab 2" thick, thin pieces of slate being embedded in the asphalt to provide a walking surface. This method of construction was developed by Mills G. Clark, former president of the Cleveland Real Estate Board.

ALTHOUGH the automobile is doing its part towards increasing the trend of decentralization, the railroads must do their part in order that the time separating a man's home and his job may be lessened. A new development in this field is a rail car that is no more like that of yesterday than the 1932 motor car is like that of 1901. Instead of weighing 130,000 or more tons it tips the scale at 13,500 lbs. Instead of requiring 300 horse-power or more, 90 is sufficient. Against an operating cost of 35 cents a mile, 12 cents is stated to be the limit. And it has pneumatic tires. This may do much to comfort the harassed commuter and increase his numbers.

THE possibilities of laminated timbers for use as columns, beams, etc., are being studied by the Forest Products Laboratory. Such timbers with low grade material in the center are from 70% to 90% as strong as solid material.

Personals

DODGE AND MORRISON, architects, after being for thirty-five years in the Wall Street district, are moving to 198 Broadway, New York.

HARRY B. AARENS, architect, announces the removal of his offices to the Hollywood Professional Building, 7046 Hollywood Boulevard, Hollywood, Cal.

ROBERT N. SHELEY, architect, 215 East Second Street, Belvidere, Ill., would like to receive manufacturers' samples and catalogs.

NORMAN W. SOREY, architect, has removed to 628 Rock Creek Church Road, N. W., Washington, D. C.

STURGIS ASSOCIATES, Inc., architects, successors to the Office of R. Clipston Sturgis, 120 Boylston Street, Boston, request that in the interests of economy manufacturers send literature addressed to the firm instead of to individual members. Members of the firm include Wm. Stanley Parker, William B. Coffin, William Adams, S. Winthrop St. Clair, Alanson H. Sturgis.

COMMISSIONS TO BE AWARDED

The transformation pictured here suggests a world of possibilities in remodeling work to discerning architects. Otherwise barren entries, when framed with artistic cast iron verandas, become quaintly charming and inviting. Leading architects and builders everywhere are taking advantage of the returning vogue for cast-iron verandas and are executing many profitable commissions. America's foremost architects have been specifying Smyser-Royer castings for almost a century.

The entry as originally constructed.

The same entry, after Smyser-Royer cast iron veranda was installed.

Consult SWEET'S
Volume A
Pages 1224—1225 for
Cast Iron Veranda Designs
Volume D
Pages 5035—5045 for
Exterior Lighting Fixtures

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"Remarkable Permanence of Color and Lustre"

Brown & Brown, Architects, of Washington, D. C., write us of their test with Cabot's Green Gloss Collopakes; "The paint was used on an old cellar door receiving the full wash of rain, and rays of the sun. A comparison with a protected control sample shows remarkable permanence of color and lustre."

Other architects say: "Still glossy, true green and unimpaired" . . . "My experience would indicate no better outside paint" . . . "As fresh and glossy as day applied" . . . "A decided difference in favor of your paint" . . . "The best green I have ever used" . . . "It's holding up 100%" . . . "I never saw anything else stand up on a concrete floor" . . . (Names on request.)

Cabot's Gloss Collopakes are made without fillers and are therefore non-fading. They have much more covering power than ordinary paint and they retain their gloss out-of-doors. Made in all colors, but particularly famous in permanent greens for doors, shutters and trim. Mail the coupon below for more complete information.

New England Telephone and Telegraph Exchange Building, Greenfield, Mass. Architects, Densmore, LeClear & Robbins. Shutters and outside wood trim finished with Cabot's Gloss Collopakes in special color selected by the architects.

Cabot's Gloss Collopakes

Made by the Makers of Cabot's Creosote Shingle and Wood Stains

Samuel Cabot Inc. 141 Milk St., Boston

Please send me your "Green Book" together with Gloss Collopake color card.

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AA-11-32

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INDEX TO ADVERTISERS

This index is an editorial feature, maintained for the convenience of readers. It is not a part of the advertiser's contract and American Architect assumes no responsibility for its correctness.

American Enameled Brick Corp. 87
Ayer & Lord Tie Co. 98

Celotex Co., The 89
Cabot Inc., Samuel 100
Carnegie Steel Co. 8
Carter Bloxonend Flooring Co. 90
Columbus Coated Fabrics Corp. 101
Congoleum-Nairn Inc. 81-82-83-84
Century Wood Preserving Co. 98
Cutler Mail Chute Co. 92

General Electric Co. 3-91
Good Housekeeping 102

International Nickel Co., Inc., The 97

Jackson Co., Wm. H. ..... Second Cover
Jamison Cold Storage Door Co. 97

Kliegl Bros. 97

Minneapolis-Honeywell Regulator Co. ... Third Cover

National Tube Co. 7
National Lumber & Creosoting Co. 98

Petroleum Heat & Power Co. 1

Smyser-Royer Co. 99
Stromberg-Carlson Telephone Mfg. Co. 97

Todd Combustion Equipment, Inc. 5

United States Plywood Co. 85
United States Mineral Wool Co. 92

Wood Preserving Corp., The 98
Westinghouse Electric Co. ..... Back Cover

Youngstown Sheet and Tube Co., The 2

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Even the SMALL HOME Can Afford Wall-Tex–

Canvassed Walls – for every room in the home!

Tulip Satinesque Pattern

WHEN you are planning a home of any size — when you are called upon to handle a remodeling job — turn to Wall-Tex for true economy in wall and ceiling coverings.

Wall-Tex has the beauty and the character that good architects associate with the homes they plan. Moreover, it is washable. Radiator streaks, picture marks and grease spots are quickly removed with mild soap and water — leaving the lustrous surface clean, beautiful and new in appearance even after years of service

Wall-Tex is substantial — durable! It helps to prevent plaster cracks. Ideal for ceilings. And it is easy to hang. It goes on smoothly — and makes rich, decorative rooms that any home owner can rightfully be proud of.

Today, when so much merchandise of doubtful quality is paraded before the public at low prices, the architect's responsibility is greater than ever. Wall-Tex makes no claim for low price — but it will faithfully live up to every good word you say for it on the basis of real *quality* and true *economy*.

Wall-Tex is made in beautiful patterns and colorings for walls and ceilings — for homes, apartments, hotels — buildings of all kinds. Special plain numbers are made for use as a foundation over white plaster for further decoration such as plaster effects or plastic paint treatments. Mail the coupon for samples.

See Sweet's Page C-3414

WALL-TEX

fabric WALL COVERINGS

Columbus Coated Fabrics Corporation, Dept. B-10, Columbus, Ohio

I would like samples of your fabric wall coverings; also your free booklet, "More Charm in the Home", and information for my AIA file.

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XUM

Keeping Your Old House Up To Date

By R. W. Sexton, Architect

At left: an attic in an old house, showing roof rafters and wall framing to which wallboard is to be applied to make a livable room. Below: the same space, now a delightful living or recreation room, well lighted by the window at one end and by dormers at the sides. Bookshelves have been introduced in the wall opposite the fireplace to take advantage of otherwise unused space

YOU may have a charming, well-designed house, adequate in every respect but that of space. You have simply outgrown it. It is not always easy to add a new wing to a house. Perhaps the lot does not allow any addition, and few houses are planned so they can be enlarged. But what about converting the attic into a livable room? Surely your old house must have an attic, for twenty years ago an attic was considered just as important as a front door.

We did not know as much about insulation in those days, but we did know that a lot of cold air in winter and hot air in summer came in through the roof and sifted into the rooms below, making them uncomfortable. (Continued on page 87)

A dormer window in an attic looks like the picture above when it is under construction. Here a casement window was used because the space was too low for the double-hung type. Either may be used, however, depending on the house

Attic space can be converted into a delightful guest bedroom, left, with an adjoining bath. Here the dormer, an entirely different type from the one above, has a double-hung window reaching almost to the ceiling, which is naturally low

51

From an article by R. W. Sexton, architect, appearing in Good Housekeeping for October

GOOD HOUSEKEEPING'S 1,850,000 families learn from frequent articles such as this, how remodeling can be done easily and less expensively with the help of a good architect.

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Everywoman's Magazine

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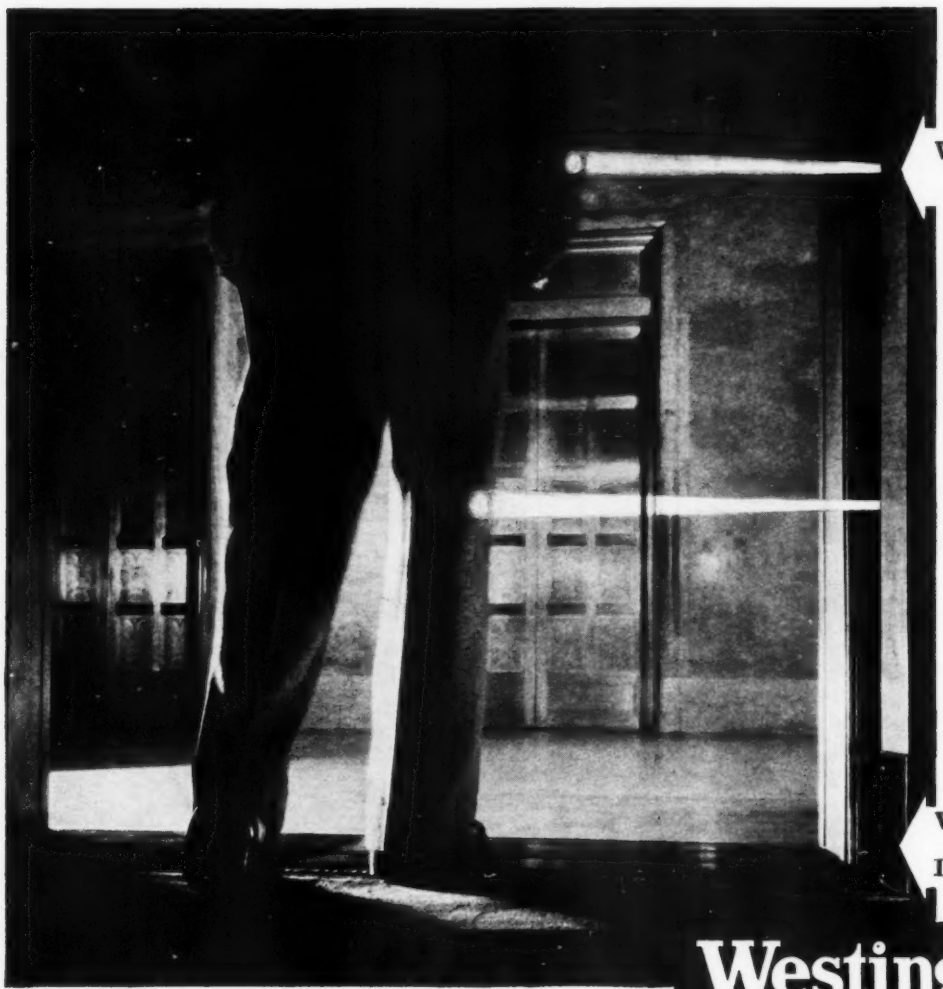

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